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The Role of Faculty in the Effectiveness
of Fully Online Programs

by

Sami M. Al-Salman

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in
Computing Technology in Education

Graduate School of Computer and Information Sciences
Nova Southeastern University
2013

An Abstract of a Dissertation Submitted to Nova Southeastern University
in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

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Sami M. Al-Salman
April 2013

The enormous growth of online learning creates the need to develop a set of standards and guidelines for fully online programs. While many guidelines do exist, web-based programs still fall short in the recognition, adoption, or the implementation of these standards. One consequence is the high attrition rates associated with web-based distance learning programs. This poor outcome has a negative impact on the perceived quality of these programs which in turn limits the resources that are made available to academic institutions for implementation. Faculty plays a significant role in this dilemma. While academic administrators strive to enhance their online offerings for a number of reasons, faculty are faced with a number of barriers that deter them from adapting to this mode of delivery.

This report outlines how an in-depth analysis of these barriers was carried out. A mixed research synthesis design approach known as metasummary was used to synthesize the quantitative, qualitative, and mixed research studies that address the issue. The outcome of the synthesis was a set of solutions and recommendations that can be used to increase faculty buy-in and ownership of online learning. Regulatory bodies responsible for accrediting distance programs can benefit from these recommendations by including specific guidelines that explicitly consider the level of faculty satisfaction as a measurement of effectiveness when evaluating fully online programs.

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Chapter One

Introduction

With the proliferation of online learning it has become increasingly important to monitor its implementation and measure its outcomes. While acknowledging that a vast amount of research and work has been put into developing standards and setting guidelines for distance learning programs, many web-based programs still fall short in the recognition, adoption, or the implementation of these standards. One reason for this shortfall could be that the agencies responsible for accrediting these institutions have not developed criteria for assessing fully online programs and are dependent on their traditional accreditation criteria during assessment. The high attrition rates associated with web-based distance learning programs fuels the need for a set of standards even further. The low retention rates typical of many online programs have a negative impact on the perceived quality of these programs which may in turn limit the resources that are made available to academic institutions to initiate or sustain the programs.

Faculty plays a significant role in this dilemma. Regulatory bodies responsible for accrediting distance programs can benefit from including specific guidelines that explicitly consider faculty in the measurement of effectiveness.

Context

Rovai, Ponton, and Baker (2008) suggest that if any element in a structured learning environment is separated by time and/or by space, then the learning takes place in a distance learning setting. Moreover, when the medium used to support the educational transaction is the World Wide Web then this type of learning is referred to as web-based learning, e-learning, or online learning.

Online learning has experienced tremendous growth over the past decade. A number of factors have led to this growth. Institutions have been able to respond to challenges that have emerged due to changing student demographics, increased demands for accountability, and decreased state and federal funding (Tabata & Johnsrud, 2008). Furthermore, increased competition among academic institutions and the adoption of this mode of learning by many for-profit postsecondary entities has forced otherwise reluctant institutions to adopt distance education. To sustain this growth, it has become necessary to employ a pool of competent faculty who can take ownership and engage effectively in the process. However, in spite the fact that online learning has matured and is no longer in its infancy, faculty still pose a concern (Allen & Seaman, 2013).

The physical characteristics, technological requirements, and social implications associated with this modality of learning make it imperative that instructors who partake in e-learning initiatives occupy new roles. These roles differ from what campus-based learning has traditionally required. In fact, there are two separate components that must be accounted for when defining the role of the instructor in online programs. The first component involves the type of competencies that are required to fulfill these roles. The second component entails the necessary factors that enable faculty members to achieve these competencies. The attitudes that faculty members carry towards distance education and the perceived barriers and obstacles standing in the path to success are two major elements that contribute to this second component (Al-Salman, 2011). Academic administrators have a major responsibility in alleviating faculty concerns and increasing their acceptance of online learning. This responsibility can be met by recognizing how faculty perceive this modality of learning and then by providing the necessary resources and training to render faculty perception towards distance learning a positive one.

Furthermore, many web-based programs still fall short in the recognition, adoption, or the implementation of standards and guidelines especially where faculty is involved. This shortfall suggests the need for revisiting these guidelines and criteria and producing recommendations with a renewed focus on the role faculty plays in these online initiatives.

Problem Statement

The enormous growth that has occurred in distance education coupled with the poor retention experienced by online learning programs is a cause for analyzing and evaluating the role faculty plays in web-based learning initiatives.

The growth in online enrollments has far exceeded the growth that has occurred in its traditional counterparts over the last decade. Furthermore, the indicators suggest that this growth will continue (Allen & Seaman, 2011). While it has been confirmed that the online mode of delivery can surpass what the traditional mode of delivering education has to offer (Means, Toyama, Murphy, Balia, & Jones, 2009), attrition rates are consistently at least 15% higher in online courses (Shieh, Gummer & Niess, 2008; Sutton & Nora, 2009; Pittenger & Doering, 2010). Faculty plays an important role in the higher attrition rate of online courses (Lassiter, 2009; Pittenger & Doering, 2010), especially when a majority of faculty members hold a view of online learning which is less than positive (Shieh, 2009; Allen & Seaman).

At another level, accrediting bodies such as the Accrediting Commission for Independent Colleges and Schools (ACICS) have expressed the need to measure quality learning outcomes for fully online programs. While the ACICS criteria lists faculty competence as a major index of quality, it does little in providing detail in what this competence involves. Additionally, the Campus Effectiveness Plan (CEP) that ACICS uses as an indicator to measure the degree to which an educational institution meets its own predetermined educational outcome (ACICS,

2006) has no explicit acknowledgement of faculty within its key elements. Since the initial writing of this report ACICS has increased these elements from five to six. These six elements include student learning assessment and outcomes, retention, graduate placement, graduate satisfaction, graduation (completion) rates, and employer satisfaction.

The need to support faculty involved in online initiatives is nothing new. Previous research has been conducted on administrative support for faculty in online programs (Meyer & Barefield, 2010). However, the lack of administrative support is not the only barrier preventing faculty from accepting web-based education (Maguire, 2005). Consequently, the need to fortify earlier work with a renewed focus on faculty has been recognized. This renewed focus helps to explicitly define the necessary ingredients that enable faculty to play a more effective role in distance education initiatives, in maintaining the quality of these initiatives, and ultimately in improving attrition rates.

Dissertation Goal

The goal of this dissertation was to develop a set of recommendations that can serve as a subset of the criteria necessary to accredit online programs. The development of these recommendations was carried out with emphasis placed on faculty involvement. Focus was placed on explicitly signifying the role faculty plays in online initiatives and what was necessary to enable this role. This focus included analyzing what was deemed necessary to obtain faculty buy-in and ownership of online education. The outcomes of the analysis were then synthesized to reach solutions that could improve the perceptions currently held by faculty regarding this mode of delivery. These solutions were developed by building upon previous research and adding structure to existing guidelines for quality online teaching that have been compiled by universities, accrediting agencies, and other academic bodies (Mitchell, 2010) . Having been

developed, the recommendations can now serve as additional components of the CEP that is used by online academic institutions accredited by ACICS to evaluate the quality and success of their online offerings. While the intent is not to evaluate attrition and student dropout rates, student retention should benefit from the solution.

The goal will be fully met when ACICS adopts the solution. Adopting the solution means that the components proposed by the results of the investigation will be implemented and accepted by the accrediting agency as principal elements of an online program's CEP.

Research Questions

1. What are the necessary skills and competencies required by faculty to be successful in an online endeavor?
2. What are the elements that will enable the transfer of ownership of online initiatives to the faculty teaching in these programs and what can academic administration do to improve faculty acceptance?
3. What are the best practices that institutions and organizations have recommended and have proven to be successful for faculty in online initiatives?
4. What other elements that are not faculty specific, if any, may be necessary to measure institutional effectiveness for fully online programs?

Relevance and Significance

Online learning has become so popular that it has overshadowed the traditional means of delivering education. The Sloan Consortium national surveys that have been published annually since 2003 give a clear indication of the growth taking place on web-based education. The national survey published in 2011 indicates that the percentage increase in students enrolled in at

least one online class has averaged 18.5% per year since these data were first collected in 2002. During this same time period, traditional offerings have only experienced an average annual growth of 2%. Moreover, there are no indications that this growth is starting to falter. Despite suggestions that the growth has reached a plateau (Allen & Seaman, 2011), the bigger picture indicates that this is not really the case. It is true that the annual growth rate for online enrollment from 2010 to 2011 was down by more than 50% from prior year. However, the proportionate growth of online to total enrollment is higher in 2011 than it was in 2010 and the percentage of online to total enrollment has increased from 28.6% to 31.3% (Allen & Seaman, 2011). The growth from 2011 to 2012 was similar to the year prior and currently students taking at least one online course are at an all time high of 32% (Allen & Seaman, 2013)

Additionally, almost 70% of the CEOs of the academic institutions that participated in the Sloan survey reported that they recognized online learning as a critical component of their long term strategy. Meanwhile, only 60% of the respondents had actually included online programs as part of their strategic plans (Allen & Seaman, 2013). With such a gap between recognition and reality, one can deduce that more and more institutions will be joining their peers causing a renewed spike in the growth curve of online enrollments. This renewed growth can also be inferred from the increasing numbers of academic leaders who agree that online is as good as or better than face-to-face instruction (Allen & Seaman, 2011).

Predictions that online learning would be able to provide a learning experience that could surpass what traditional education had to offer have been evident since the earliest of the Sloan Consortium Reports (Allen & Seaman, 2003). These predictions have been confirmed by the key findings of a meta-analysis conducted by the Policy and Program Studies Services of the U.S. Department of Education (Means et al., 2009). However, while the effectiveness of online

education has been shown to be better than its traditional classroom counterpart, studies and anecdotal evidence reveal that attrition rates for online courses are consistently 15-20% higher than for on-ground courses (Steinman, 2007; Shieh et al., 2008). Similarly, Sutton and Nora (2009) indicate that although web-based education has been around for a considerable amount of time the drop-out rates have not changed over the last 10 to 15 years. One extreme statistic, McCracken (2008-2009) as reported by Pittenger and Doering (2010, p 275), indicates that “the attrition rates of online courses can be 20-80% higher than the rates in traditional face-to-face courses.” If we accept these statistics, then even the most conservative of estimates will pronounce the negative impact of such high attrition rates. For example, if we assume that each student takes only one online course and apply a drop rate difference of only 15%, the resulting calculation indicates that more than 920,000 additional courses are being dropped annually because they are being attempted online. This number represents an enormous loss of resources and definitely a concern that needs to be addressed.

On another level, accrediting bodies such as the ACICS have expressed the need to measure quality learning outcomes for online programs. ACICS (2012) considers the three major indices of an academic institution’s quality to be the effectiveness of its educational program, the resources available to instructors and students, and the competence of its faculty. ACICS further states that “the institution shall adopt and publish a policy on the responsibility and authority of faculty in matters of academic governance. At a minimum, the policy should address the role of faculty in the development of the educational program of the institution; selection of course materials, instructional equipment and other educational resources; systematic evaluation and revision of the curriculum; assessment of student learning outcomes; and planning for institutional effectiveness” (acics.org).

Section 3-1-110 of the accreditation criteria considers institutional effectiveness to be an important indicator which measures the degree to which an educational institution meets its own predetermined educational outcome (acics.org/publications/criteria). Colleges and institutions that are accredited by ACICS are required to develop and regularly update a CEP. The primary purpose of this plan is to track continuous improvement throughout the institution, specifically in its educational programs and processes which include its online initiatives. In addition to its inherent purpose of demonstrating regulatory compliance, a well developed CEP can also serve to achieve internal effectiveness, assess progress and the need for change, and communicate outcomes to the public. The CEP is used to measure both institutional and academic quality. Institutional quality is determined by the appropriateness of the mission and goals of the academic organization, how well it uses its resources to accomplish its mission, and the degree to which its goals are achieved.

To determine academic quality, the six key elements listed earlier that include student learning assessment and outcomes, retention, graduate placement, graduate satisfaction, graduation rates, and employer satisfaction, are considered. Institutions accredited by ACICS are required to include mechanisms and initiatives within the CEP that can track and improve upon these measures. These elements coincide with the elements that are commonly associated with a summative evaluation process (Rovai et al., 2008). While the ACICS has been using these elements to evaluate the traditional programs it accredits, it seeks a similar but perhaps more suitable set of measures that can be used when evaluating fully online programs, as expressed by Tom Wickenden, the Deputy Executive Director of ACICS (personal communication, April 17, 2011).

Acronyms

ACCSC: Accrediting Commission of Career Schools and Colleges

ACICS: Accrediting Commission for Independent Colleges and Schools

CEP: Campus Effectiveness Plan

CHEA: Council for Higher Education Accreditation

C-RAC: Council of Regional Accrediting Commissions

DETC: Distance Education Training Council

IBSTPI: Board of Standards for Training, Performance, and Instruction

ITC: Instructional Technology Council

UNESCO: The United Nations Educational, Scientific and Cultural Organization

WCET: Western Cooperative for Educational Telecommunication

WPCK: Web Pedagogical Content Knowledge

Definitions

Meta-Analysis: analyzes quantitative studies and represents each with a common metric (usually the standard deviation) by statistically combining these studies. This metric is then used to determine whether the results across the studies are significant or not (Glass, 1976).

Meta-ethnography: is a procedure for deriving substantive interpretations about a set of ethnographic or interpretive studies in an effort to find key themes or concepts during the synthesis and to come up with new interpretations by translating the texts of the qualitative studies against each other (Noblit & Hare, 1988).

Meta-synthesis: a qualitative methodology that uses both qualitative and quantitative studies as its source of data. Meta-synthesis examines ideas, mind-sets, and approaches as well as conclusions and findings (Bair, 1999).

Mixed research synthesis: an extension of the meta-synthesis methodology that uses systematic review aimed at the integration of results from both qualitative and quantitative studies in a shared domain of empirical research (Sandelowski, Voils & Barroso, 2006).

Qualitative metasummary: is a type of mixed research synthesis that manages the differences between quantitative and qualitative findings. Qualitative metasummary involves the extraction, grouping, abstraction, and the formatting of findings and the calculation of frequency and intensity effect sizes (Sandelowski, Barroso & Voils, 2007).

Unbundling of faculty: Core faculty responsibilities differ between institutions. In a traditional model faculty are responsible for content and delivery as well as other functions that could include research, advising, and serving on committees. In an online environment being responsible for the technology functions could be an additional role. Unbundling or separating these roles allows the institution to utilize its resources based on each of these functions while enabling the faculty to focus on their areas of strength and expertise (Neely & Tucker, 2010).

Organization

The organization is as follows. Chapter Two of the report contains a review of the relevant literature and provide the knowledge base and the theory upon which the work was developed. Chapter Three describes the methodology, the type of research design and the approach that was used to carry out the work. Chapter Four contains the bulk of the investigative process along with the discussion and results of this investigation. Chapter Five concludes the report with a set of recommendations, implications and a summary of the work.

Chapter 2

Review of the Literature

This chapter addresses the main fields of investigation relevant to the research problem. The first includes the competencies required by faculty to teach in online programs. Directly connected to acquiring these competencies are faculty perceptions of distance education, and the barriers that obstruct faculty acceptance and buy-in of e-learning programs. Another field of investigation includes the prior studies that have attempted to develop evaluation criteria for online programs. Last, while not being the main focus of the research, other evaluation criteria and components of quality that are necessary to sustain an online distance education program are addressed and compared to what is currently being practiced by ACICS.

The Faculty Issue

The faculty issue comprises two components. The first component involves the necessary competencies and skills that an instructor should be equipped with in order to excel in an online initiative. The role of the instructor delivering online courses is inherent to this component. The second component is related to the perceived barriers that prevent faculty from acquiring these competencies and in turn accepting the new roles required of them.

Competencies and Roles

A competency is defined by the International Board of Standards for Training, Performance, and Instruction (IBSTPI) (www.ibstpi.org) as “a knowledge, skill, or attitude that enables one to effectively perform the activities of a given occupation or function to the standards expected in employment.” Various approaches have been used to categorize competencies. Some of these classifications are based on the types of roles to be performed while

others use the nature of the skills as a basis. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2005) proposal recommends four competency areas for the integration of information communication technology into education that include social issues, content and pedagogy, collaboration and networking, and technical issues.

Bawane and Spector (2009) suggest that competencies related to social issues such as establishment of community, interactivity, team projects, communication, and support are especially critical for online teaching. Shieh et al. (2008) indicate that online instructors must acquire a new set of competencies that include pedagogical, psychological, and social issues that arise from the absence of visual cues. Similarly, Yang and Cornelius (2005) maintain that faculty teaching in distance education must learn to design interactive learning activities, interact with the learners, and provide immediacy to the students online. Darabi, Sikorski, and Harvey (2006) see instructor interaction as one of the fundamental competencies required in distance education. Lassiter (2009) concedes that quality facilitation will improve retention and for the online environment to be an effective one, instructors should have the capacity to welcome, maintain, and see the students through their courses up until completion.

Lee and Tsai (2010), on the other hand, place more emphasis on the areas of pedagogy, content, and technology and propose that online instructor competencies or dimensions of knowledge should be based on their Web Pedagogical Content Knowledge (WPCK) framework. WPCK outlines the need for instructors to be able to incorporate online activities into their content and do this while using the appropriate pedagogy to support these online activities. WPCK describes how the competency areas of content, pedagogy and technical skills integrate with each other. Distance education instructors must be technologically experienced so that they can manage the logistical aspects of delivery in addition to its pedagogical components (Darabi

et al., 2006). Similarly, Oliver, Osborne and Brady (2009) suggest that an online instructor should possess at least three critical technological competencies that include learning how to manage the online environment, preparing content for the environment, and being able to leverage the online tools. Grant (2010) suggests the need for online instructors to become digital.

Edwards, Perry, and Janzen (2011) consider a number of attributes to be the most critical to the making of an exemplary online instructor. These attributes include being prompt, present, organized, respectful, creative, enthusiastic, in addition to fostering interaction, and building community. While these attributes could equally be used to describe successful university faculty teaching in any mode of delivery, exemplary online education goes beyond what is required for traditional learning. Teaching strategies that work well in the traditional classroom do not necessarily work equally well online. An online course is designed differently and in order to have quality online education not just instructor attributes but teaching strategies, technical skills, and course design, are all basic components.

The four competency areas recommended by UNESCO (2005) coincide with the main roles of the online instructor. These roles encompass pedagogical, social, managerial, and technical tasks. Spence-Robinson (2006) indicates that the success of an online initiative can only occur if the online instructor assumes an assortment of roles and performs them adequately. These roles include facilitator, advisor and counselor, assessor, content expert, technologist, designer, and administrator. Bawane and Spector (2009) indicate that although the competencies required to teach online are not fundamentally different than those required in an onsite setting, the application of these competencies may differ according to the context of the role the faculty member has to play in the learning process. These roles include professional, pedagogical, social, evaluator, administrator, technologist, advisor/counselor, and researcher. Goold, Coldwell and

Craig (2010) add content facilitator, meta-cognition facilitator, process facilitator, and resource provider to the list. Headley (2005) suggests that online instructors must play five roles. These roles include space planner, pacesetter, host, connector, and mirror. The first four of these roles involve the planning and the proper execution of the interaction and facilitation within the online course. The fifth role entails providing feedback and assessment.

The faculty role will also depend on the model adopted for curriculum development. Universities will generally follow one of three major models for curriculum development. These three models include the traditional model in which a faculty member is paid a stipend to develop a course, the blended model where a faculty member is teamed up with external curriculum writers, and curriculum departments where subject matter experts and curriculum developers with expertise in course design are hired as full time staff (Neely & Tucker, 2010). Many institutions regard the blended model as being the most effective since developing an online course requires pedagogy and technology expertise-something few faculty possess (Oblinger & Hawkins, 2006). Furthermore, as pointed out by Easton (2003) and depending on the development model adopted by the academic institution the faculty role can be defined even further. The instructor could be the course designer/content expert and the lead expert, or step into the course as a mentor/facilitator or serve as both.

Faculty Barriers

However, there is a caveat. In order for faculty members to achieve the necessary competencies and assume their online roles successfully their attitudes towards online e-learning must be positive. The attitudes and perceptions of faculty are factors that can influence the failure or success of an online program. These attitudes and perceptions are directly impacted by their comfort with the online mode of teaching (Tanner, Noser & Totaro, 2009). Furthermore, if

faculty members have negative perceptions of e-learning they will most likely not participate in distance programs.

Furthermore, the perceptions held by faculty regarding online learning are a major cause for the higher student attrition rates. Evidence shows that while academic administrators have recognized the importance of online learning for some time now (Allen & Seaman, 2011), faculty do not share the same enthusiasm. The Sloan Consortium reports indicate that low faculty acceptance of the online mode of delivery has been at a constant value for the last decade only to decline further in the most recent national survey. Allen and Seaman (2013) indicate that only 30.2% of chief academic officers believe that their faculty have accepted the value and legitimacy of online education, a rate lower than what was recorded in 2004. Shieh (2009) reported that a survey of more than 10,000 faculty members at 67 public campuses revealed that more than 70% felt that learning outcomes were inferior. This statistic dropped to 48% among faculty who had taught online. This high percentage of online instructors with a negative view of the quality of education they are delivering is significant. In fact, the gap between administration and faculty in the acceptance of online learning initiatives has been one of the major impediments to online learning in many colleges and universities. Orr, Williams, and Pennington (2009) maintain that the development of a quality online program is closely tied to the ability of administration to overcome faculty barriers. Therefore, the identification of these barriers and the means by which their influence can be minimized should be of utmost priority to academic administrators who seek to offer online initiatives.

The barriers that impede faculty acceptance of e-learning and restrict the success of online initiatives revolve around a number of core issues. These issues include perceived quality

of education, technology use and skills, course design and technical support, training and development, student readiness, and faculty workload and compensation.

The perceived quality of distance education has been a major impediment for faculty (Hartman, Dziuban, & Moskal, 2007). Many instructors see distance education as inferior to onsite learning in quality and consider it solely as a means of making a profit. Yang and Cornelious (2005) indicate that many faculty members view online learning with suspicion because it is offered by divisions of extended study or continuing education and delivered by adjunct faculty with no terminal degrees. HeuBeck (2008) maintains that distance education creates a fertile opportunity for fraudulent degrees. Furthermore, Chau (2010) suggests that the commoditization of knowledge that has resulted from the increased corporatization of higher education has increased faculty fears and has served as a barrier to faculty acceptance of the online mode of delivering education.

The fear of technology is another barrier. The proper integration of technology with pedagogy and content is a main requisite for a successful online course (Lee & Tsai, 2010). Bolliger and Wasilik (2009) report that concerns related to the use of technology were perceived by faculty as one of the major issues that affected their satisfaction with web-based learning. Bhati, Mercer, Rankin, and Thomas (2009) suggest that online instructors concerns about the use of technology include hesitancy and fear of the technology as well as the fear of losing the essence of learning when mixing technology with pedagogy. Similarly Orr et al. (2009) maintain that fear of technology has always been an issue that de-motivates faculty and Chen (2009) indicates that instructors are more likely to adopt technology-mediated distance education as their skill set and technical expertise increases.

At another level, Gibson and Harris (2008) report that faculty express apprehension with the online model because of the technology problems associated with delivery. These technology problems cause student frustration and lead to poor evaluation of faculty. Ill-defined roles can increase this apprehension (Bhati et al., 2009). In the online delivery mode, the role of faculty is sometimes unbundled (Neely & Tucker, 2010). An unbundled faculty role involves having a facilitator deliver instruction and assess learning outcomes. Meanwhile there may be a curriculum writer and a subject matter expert who design and maintain the academic content of the courses, an academic advisor who advises students and monitors their progress, and an instructional designer who aligns the technology with the overall curriculum design. The concern arises when the faculty member performs all these functions alone. This occurrence is not an isolated one. In fact, Batts, Pagliara, Mallett, and Mcfadden (2010) indicate that more than 63% of faculty teach themselves how to develop and deliver online classes.

It is unfair to assume that faculty can rise to the occasion and meet the new set of expectations that are associated with online delivery without the proper resource allocation. One of the primary types of support that can be offered to the instructor is the proper training. Unfortunately, as argued by Batts et al. (2010), a gap exists between the desire for training and the actual training that is taking place. This gap creates another obstacle that stands in the way of faculty acceptance and buy-in. Similarly, Spence-Robinson (2006) indicates that adequate training of faculty is a necessary requirement to enable instructors to adapt to the online learning environment. This training will ensure quality in online instruction and make the online experience a more positive one for the instructor.

Another barrier perceived by faculty is student-related. While web-based learning serves many students in a positive manner by allowing access to a more diverse population and

providing an interactive environment, HeuBeck (2008) suggests that online learning is not a suitable environment for non-disciplined students. Wickersham and McElhany (2010) agree and voice other student related concerns in addition to student readiness such as the students' technology abilities, security issues, and academic dishonesty.

Workload and compensation for online faculty have been an issue since online learning first became popular. Development time, teaching time and office hours, class sizes, combining onsite and online classes as part of an instructor's teaching load, and the monetary or temporal compensation (or lack thereof) allowed faculty members, are all components associated with this concern (HeuBeck, 2008; Hartman et al., 2007; Abramson, 2003). Similarly, Bolliger and Wasilik (2009) contend that some of the primary concerns that affect faculty satisfaction in online education are workload issues, adequate compensation, and the existence of a reward system for promotion.

Alva (2010) labels many of the concerns that have led to the creation of the barriers opposing faculty acceptance as myths. The first of these myths is the perception that online initiatives have been aggressively marketed by for profits because it makes it possible to have huge classes thereby greatly reducing instructional costs. In reality, most online courses have much smaller class sizes than their traditional counterparts. For example, the University of Phoenix has online courses with class sizes that average from nine to 18 students. A second myth is that online courses lack rigor. The truth is that class sizes, especially in the first two years of traditional college are lecture style and large in size. Online classes are smaller and allow for much more interaction. Another myth is that employers are reluctant to hire graduates with online degrees and that graduates with online degrees are open to scrutiny during the hiring process. Meanwhile, the Imagine America Foundation shows that online degrees and certificates

are widely recognized by employers (Alva, 2010). Furthermore, for profit online schools have an incentive to be in compliance and thus have a high regard for quality. In general, for profit institutions have shown that in order to develop and maintain a successful online endeavor one must invest generously in such an initiative (Alva, 2010). Perhaps, the biggest thumbs-up that online education has received is the outcome of the meta-analysis conducted by the Policy and Program Studies Services of the U.S. Department of Education. This study postulates that online learning is able to provide a learning experience that can surpass what traditional education has to offer (Means et al., 2009).

Workload and compensation of online faculty is another barrier that has been open to debate. Bolliger and Wasilik (2009) suggest that while workload issues and adequate compensation are concerns for faculty neither score very high on the importance scale. Similarly, the findings of Orr et al. (2009) revealed that release time and extra compensation are not major motivators for faculty to teach online.

It is imperative that faculty realize these truths in order to give them more confidence in the online mode of learning. This realization can only occur with training and education. Orr et al. (2009) suggest that effective processes, practices, and a reliable infrastructure can lead faculty to own the courses they are teaching. Moreover, the area that offers the greatest potential for improvement is strategic communication concerning online education. Data support the need for a greater departmental recognition of faculty's online teaching efforts. Educating faculty is imperative in order to change their mindset. To give a simple example, many faculty express the fear of increased cheating in online courses. This fear should not be an issue when and if the course is well constructed. A well constructed course means it is learner-centered, community-

based, and is designed in a manner that promotes learner empowerment and self reflection (Lassiter, 2009).

Evaluation Guidelines and Best Practices

Accreditation is a means of granting recognition to an institution that has met a pre-described set of standards and criteria. This accreditation is granted through initial and periodic evaluations of the institution. Rovai et al. (2008) consider accreditation as a form of evaluation that uses expertise-oriented and objectives-oriented evaluation approaches. The accreditation process involves a cycle that includes setting standards, performing a self-study, on-site evaluation, publication, monitoring, and re-evaluation.

Seok (2007) maintains that accreditation brings consistency and stability to an academic institution and the responsibility of the accrediting organizations is to control the quality of education. Rovai et al., (2008) indicate that when an online learning initiative is undertaken at an educational institution, the quality of this program not only affects the accreditation for this distance program but the accreditation of the institution as a whole. Morabito (2008) suggests that gaining accreditation for an online school is a factor which should be deemed of utter importance in order to increase enrollment and stature among other institutions of higher learning.

In the United States, the Department of Education (DOE) recognizes two types of accreditation that include institutional accreditation and programmatic or specialized accreditation. Institutional accreditation can be either national or regional. There are six regional accrediting bodies. These include the Middle States Commission on Higher Education (www.msche.org), the New England Association of Colleges and Schools (www.deasc.org), the

North Central Association of Colleges and Schools (www.ncacasi.org), the Northwest Association of Accredited Schools (www.boisestate.edu), the Southern Association of Colleges and Schools (www.sacs.org), and the Western Association of Schools and Colleges (www.wascWeb.org). There are a number of national accrediting agencies probably the most well-known of these agencies are the Accrediting Council for Independent Colleges and Schools (acics.org) and the Accrediting Commission of Career Schools and Colleges (ACCSC) formerly known as the Accrediting Commission of Career Schools and Colleges of Technology prior to 2009 (accsc.org). An example of a specialized accreditation is the American Psychological Association Commission on Accreditation (apa.org) which is recognized as the body that accredits U.S. doctoral programs in clinical counseling, school, and combined professional-scientific psychology and related fields. The Council for Higher Education Accreditation (CHEA) is the primary national agency that recognizes accreditation agencies and assures quality to the Congress and the Department of Education.

During the last decade of the last century when distance education over the Internet began to experience its initial growth, most states and accreditation agencies did not have any standards or guidelines to regulate online schools. Today, the Distance Education Training Council (DETC) which is approved by the Department of Education is recognized for the accreditation of postsecondary institutions in the United States that offer degree programs delivered online. Initially created as the National Home Study Council in 1926 as a means of ensuring the quality of home study, this organization has set rules to promote sound educational standards and ethical business practices within the correspondence field since 1927.

Historically, accreditation has been focused on the input-based traditional evaluation of bricks and mortar schools and online learning was unable to meet public expectations because of

its lack of accreditation no matter how good the quality. More recently, accreditation bodies have been moving away from standards that are input based to standards and criteria that rely more heavily on student outcomes. This type of approach to measuring quality and effectiveness has required a conceptual shift towards analyzing learning outcomes and being able to differentiate between institution, program, and students units of analysis as well as to appreciate the results associated with cognitive learning, career success, and satisfaction (Rovai et al., 2008). Student learning outcomes can be of different forms but must include at a minimum some indication of student attainment. Portfolios, capstone assignments, comprehensive assignments, and results of certification exams could be used as evidence of learning. When the program unit is measured, graduation rates and persistence rates can be used. Rovai et al. (2008) advise that caution should be taken when identifying a set of outcomes because relying too heavily on outcomes can cause the data to have a higher likelihood of being corrupted.

One question that needs to be answered is whether the standards used to evaluate traditional programs in higher education can be replicated and used for online learning. Caution is warranted because of the physical differences between traditional and distance learning. The credit hour is an excellent example of this difference. The Carnegie unit defines the credit hour as one hour of instructor contact per week plus two hours outside the classroom for the duration of 15 weeks (or its equivalent if there are no formal classes). Meanwhile, opponents of this school of thought argue that the credit hour as defined is not a measure of quality, but rather one of quantity. Robert Mendenhall of Western Governors University that award credentials based on competency maintains that there should be a paradigm shift in how class time and credit hours are measured and now is the time to start measuring learning rather than time (Blumenstyk, 2010). Additionally, Suzanne Walsh, previously from Lumina, and currently a senior program

officer in education at the Bill & Melinda Gates Foundation, says that higher education is no longer a lecture, a textbook, and a classroom questioning the need for the credit hour as a measure for pricing, financing, and faculty load. However, without an alternative agreed upon standard, the current definition should be upheld and failure to do so can cause accrediting bodies themselves to come under scrutiny. Recently, an alert *memorandum* was issued to Higher Learning Commission because of its decision to grant accreditation to the American Intercontinental University despite qualms over how it awards credits for its distance education courses (Blumenstyk, 2010).

Seok (2007) maintains that setting proper standards requires a considerable amount of resources. The standards exist to solve an existing problem experienced by those who are providing the resources. Standards have two benefits. Firstly, standards are created to reduce the costs of content resource discovery and to develop and maintain the quality of this content. Quality material and content that satisfies pre-described standards can be reused thereby reducing time, effort, and cost. Secondly standards increase efficiency of interoperability between systems. Universal standards can reduce the contrast experienced from different learning systems. While there is no recognized set of standards, the increased focus on distance education has led the six accrediting bodies to propose a set of recommendations or guidelines that can develop and evaluate distance learning programs. Most of these recommendations are broad and flexible mainly because the discipline is relatively new. These guidelines are in the form of best practices to be observed or red flags to be avoided. Seok (2007) suggests that what are thought of as best practices should function as a framework for the self-assessment of distance learning programs. Accrediting agencies should require their accredited institutions to develop guidelines that serve their own needs and mission. At the same time, a set of

recommended guidelines should be included as a minimum. These guidelines include the intent to develop the academic processes necessary to implement effective distance learning, assist the learner and faculty with easy access to the resources, provide development opportunities for faculty, assess learner outcomes, and evaluate the effectiveness of the learning experience.

The quest for setting criteria for the evaluation of online programs is not new. Over the last decade a number of plans and guidelines have been developed to satisfy this need. The most accepted of these plans was developed by the Western Cooperative for Educational Telecommunication (WCET, 2001). The best practices developed by WCET covered five areas which include institutional context and commitment, curriculum and instruction, faculty support, student support, and evaluation and assessment. These practices were replaced in 2006 with a set of guidelines which were developed by the Council of Regional Accrediting Commissions (C-RAC, 2006). In these guidelines, the components of quality were expanded from five into nine. In 2009, these latter guidelines were superseded by a new list of best practices that were developed jointly by WCET, the Instructional Technology Council (ITC), and the University of Texas Telecampus (<http://www.wiche.edu/pub/13441>). This new list was separated into a number of sub-categories comparable to the best practices developed in 2001 with the addition of one component, namely planning for sustainability and growth. There are no further references in the literature of any revisions to these best practices that were adopted in 2009. One must acknowledge, however, that continuous updating of evaluation guidelines is necessary, if for no other reason than to accommodate the exponential changes in technology that occur every year. In fact, even accreditation standards that apply to traditional offerings are in constant update and revision. For example, in July of 2011, the Commission on Institutions of Higher Education, New England Association of Schools and Colleges (cihe.neasc.org), incorporated a number of

revisions into its previously adopted standards for accreditation. The new standards comprise 11 components that include missions and purposes, planning and evaluation, organization and governance, the academic program, faculty, students, library and other information resources, physical and technological resources, financial resources, public disclosure, and integrity. Many, if not all of these components are equally applicable to distance learning.

Quality Indicators

When an online education program is evaluated there is a need to determine what its key performance indicators are. These indicators represent variables that can be measured during a program evaluation to produce statistical data that can be used in turn to determine the success of a program. These key indicators can also provide a frame of reference for strategic planning cycles and can be used as an institutions performance management framework.

The Sloan Consortium (www.sloanconsortium.org) defined five pillars that could be used as a framework for measuring and improving online programs (Lorenzo & Moore, 2002). These pillars included learning effectiveness, student satisfaction, faculty satisfaction, cost effectiveness, and access. The first stipulated that online learning could be just as good as and perhaps better than traditional learning because it allows for interaction, learning of a higher order, and creating communities of inquiry. The second views the student as a consumer with expectations. An educational program with highly interactive courses that involve active learning can lead to high satisfaction. The third suggests that faculty satisfaction is no less important than student satisfaction when determining quality. Faculty sees technology as a means to increase teaching effectiveness when adequate moral and administrative support is provided. The fourth predicates that cost effectiveness is necessary to sustain a quality program acknowledging that adopting an online learning initiative is an expensive undertaking. The fifth and last pillar

addresses access. Access means reducing all barriers and is an aspect that covers almost every piece of the online learning enterprise.

Over the past nine years since 2002, there has been a lot of work reported in the literature related to the determination of the quality indicators of online learning. Much has revolved around the five pillars of quality defined by the Sloan Consortium while redefining or placing emphasis on one or more of its elements.

Chaney, Eddy, Dorman, Glessner, Green, and Lara-Alecio (2009) conducted an exhaustive literature review which resulted in a list of quality indicators that were seen as the most common and prevalent in the literature. This list had a lot of common ground with the set of key indicators suggested by Rovai et al. (2008). These commonalities include reliable technology, faculty training and support, student support, and institutional support and resources in general. Chaney et al. (2009) place additional emphasis on the quality components that focus on learning effectiveness and spell out these components in more detail. For example, the final list stresses the necessity of creating course structure guidelines, in addition to implementing guidelines for course development and review of instructional materials. Student-teacher interaction should be promoted in the design of distance education courses and a mechanism that allows prompt feedback is essential. To ensure quality, online programs should also utilize active learning techniques that can generate enthusiasm among learners and a respect for diverse ways of learning must exist within the program design. Wang (2004) also focuses on the quality elements that revolve around learning effectiveness and suggests that these elements fall into six key areas. The six key areas are assessment, course design, interaction, learning outcomes, learning resources, and pedagogy. Performance in these areas can be measured with faculty perception, outcomes assessment, career, scholastic and professional achievement surveys and

records, employer feedback, and finally institution-based enquiry into how well their online programs are meeting their learning objectives.

Jackson and Helms (2008) suggest that key quality elements of online education fall into three categories that include student responsibilities, faculty responsibilities, and administrator responsibilities. While students assume a certain level of responsibility for acquiring specific competencies and educators are responsible for the proper delivery of the material, administration and academic leadership carry a larger burden in providing quality. Chaney et al. (2009) maintain that any distance education initiative must be aligned with the institutions mission and a clear analysis of audience is necessary before adopting a distance program. It is also the institution's responsibility to provide program evaluation and ongoing assessment to maintain quality. Wang (2004) concurs that effective assessment strategies should be included in the development of any online program to insure the success and validity of this type of delivery. Furthermore, this assessment should have explicitly stated outcomes, have strong faculty involvement, and occur through a variety of methods.

Rovai et al. (2008) suggest that the variables that can be used to measure the quality of an online program include technology factors, faculty training, content, interaction, student enrollment, support services, engagement, peer and student evaluation, persistence (course and program completion), and student achievement. Meanwhile, Mitchell (2010) questions whether quality should be measured using quantitative data such as retention rates, student's grades, and number of graduate employments or whether more qualitative measurements are needed. Mitchell (2010) suggests that the quality of an online initiative can be defined through four basic elements. The first of these four elements includes quantitative and qualitative reports on stakeholder perceptions. Stakeholders could include but not be limited to, the students, faculty

and staff, accrediting bodies, and the community surrounding the academic institution. This community includes the combination of resources from which an online program secures its growth as well as enhances its curriculum. The second element of quality is obtained from quantifiable components such as grade scores, retention rates and placement rates. This element is for the most part, a common one between academic programs irrespective of the mode of delivery. These types of data are most likely required by accrediting agencies, boards of trustees and other regulatory bodies. The third element of quality involves course design. Depending on whether learning is considered to be transmitted or constructed the definition of quality course design can differ. Online learning which is suitable for constructivist learning will rely more heavily on the course design than it will in traditional delivery methods. The fourth and final element of quality according to Mitchell (2010) entails standards developed by various groups and associations. Examples of such associations include the Sloan Consortium (www.sloanconsortium.org), Quality Matters (www.qualitymatters.org), and Transparency by Design (presidentsforum.excelsior.edu/projects/transparency.html). In fact, what the quality of an online program entails has long been an issue for debate. Benson (2003) indicates that quality in distance education has been viewed as overcoming the stigma associated with online learning, quality is accreditation, quality is an effective course development process, and quality is effective pedagogy. Shelton (2011) maintains that while the concept of quality in distance education programs is difficult to define, this difficulty should not be used as an excuse to ignore the need for assessment and self-evaluation.

Summary

Web-based education has forced faculty into new territories that require them to adapt, adopt new roles, and acquire new competencies. However there are many barriers that stand in

the way of this transition. While these barriers, such as the ones outlined above are relevant and real, they can be overcome. Consequently, this proposal is to study and analyze these barriers in depth in order to develop a set of recommendations that can be used to motivate and fully prepare faculty for the online teaching experience. Twigg, president and CEO of the National Center for Academic Transformation (thencat.org), suggests the need to use new approaches and come up with new structures for evaluating distance education rather than trying to *bolt technology* onto existing structures. While many sets of guidelines and criteria exist and are experiencing continuous revisions many distance education programs lack oversight that is specific to the needs of this mode of delivery. The set of recommendations that emerge from the analysis and synthesis of faculty de-motivators that is to be carried out can assist in alleviating this concern. This assistance can take place by having the recommendations serve as a subset of the criteria used to evaluate online programs as well as a means of increasing faculty buy-in and ownership of distance education initiatives.

Chapter 3

Methodology

A vast amount of research and work has been put into developing standards and setting guidelines for distance learning programs. Nonetheless, many web-based programs still fall short in the recognition, adoption, or the implementation of these standards. Additionally, while more colleges and universities are venturing into web-based education and postsecondary online enrollment increases, faculty perception of the quality of online programs and faculty acceptance of online initiatives remains skeptical (Allen & Seaman, 2013). Given the important role faculty must play in order for any online initiative to succeed this hesitance poses a concern. This concern gives cause for analyzing and evaluating the role of the online instructor in an effort to extract solutions and means of overcoming any negative perceptions and making them positive.

Research Design

The popularity of qualitative research combined with the technological advances that have occurred in the computer field over the past two decades have led to the rapid accumulation of this research. This accumulation has created a challenge for researchers when trying to extract meaning from the vast number of studies available on any subject. Integrative literature reviews are incapable of much more than aggregating results and fall short when trying to interpret and translate qualitative studies (Noblit & Hare, 1988).

One approach that has been suggested to counter this challenge is meta-synthesis. According to Bair (1999), meta-synthesis is a methodology that shares common concepts with both meta-analysis (Glass, 1976) and meta-ethnography (Noblit & Hare, 1988). These concepts

seek to produce a more informed understanding of a topic by systematically synthesizing studies related to it.

Meta-analysis deals with quantitative studies and tries to represent each of these studies with a common metric (usually the standard deviation) by statistically combining these studies. This metric is then used to determine whether the results across the studies under investigation are significant or not.

In a similar manner, meta-ethnography is used to synthesize findings among qualitative studies and utilizes a “rigorous procedure for deriving substantive interpretations about a set of ethnographic or interpretive studies” (Noblit & Hare, 1988, pg 9). This methodology seeks to find key themes or concepts during the synthesis and tries to come up with new interpretations by translating the texts of the qualitative studies against each other.

Mixed research synthesis

In contrast, meta-synthesis is a qualitative methodology that uses both qualitative and quantitative studies as its source of data. Meta-synthesis examines ideas, mind-sets, and approaches as well as conclusions and findings. It differs from meta-analysis in that less emphasis is given to the reduction of data and more focus is placed on trying to build new understandings. Paterson, Thorne, Canam, and Jillings (2001) suggest that meta-synthesis can be used to dig deeper and extract new knowledge and understanding from a topic rather than just draw similarities between the research papers being synthesized. Voils, Sandelowski, Barroso and Hasselbad (2008) and Sandelowski et al.(2006) have further developed this design approach and refer to the methodology as mixed research synthesis.

Sandelowski et al. (2006, p29) define mixed research synthesis as “a type of systematic review aimed at the integration of results from both qualitative and quantitative studies in a

shared domain of empirical research.” Three basic designs are suggested for conducting mixed research synthesis that are adaptations of the designs used in primary mixed research methods (Creswell, 2009). These three basic designs include segregated, integrated and contingent. Each of these designs is applicable to different views of the relationships between the quantitative and qualitative findings.

The segregated design assumes that quantitative and qualitative studies are wholly different entities, can be readily distinguished from each other, and their differences warrant separate analyses that correspond to their specific type of research. In an integrated design, the methodological differences between qualitative and quantitative studies are minimized and can produce findings that can be transformed into one another. This design approach is best suited to scenarios where the qualitative and quantitative findings are able to corroborate, extend or counter each other. In a contingent design the results of synthesizing the findings to the first research question determine the next group of studies to be retrieved in order to address the second research question and so on if a third question arises from the analysis of the second.

Voils et al., (2008) maintain that it is not possible for researchers to know in advance what any set of findings will allow, or enter into a synthesis project with the type of synthesis approach already planned out. However, there exist a great number of studies, both quantitative and qualitative, that deal with faculty perceptions of online learning, the factors that motivate faculty to adopt this mode of learning and the barriers that stand in the way. The findings in these studies support, extend or oppose each other. This relationship between the findings makes the integrated design approach to mixed research synthesis the most appropriate for the problem that was addressed and the one that is was carried out the investigation.

Approach

Sandelowski et al. (2007) maintain that one of the main challenges facing mixed research synthesis is how to manage the differences that are presumed to exist between the quantitative and qualitative findings. Descriptive findings in quantitative studies are not subject to traditional meta-analysis methods. Consequently, a technique defined as qualitative metasummary is suggested to overcome this challenge. However, qualitative metasummary is not exclusive to qualitative research. It can be used to synthesize the findings in qualitative studies, the qualitative findings of mixed research studies, and the descriptive findings of quantitative studies.

In essence qualitative metasummary is a design approach that addresses one of the main challenges of mixed research synthesis or meta-synthesis. This challenge involves managing the differences that exist between quantitative and qualitative findings.

Qualitative metasummary involves the “extraction, grouping, abstraction, and the formatting of findings and the calculation of frequency and intensity effect sizes” (Sandelowski, 2007, p103). The aggregative approach indicates the use of quantitatively oriented logic in the analysis phase. After the findings are extracted and grouped into appropriate categories, the frequency effect size of each of these findings is calculated (Onwuegbuzie, 2003 as reported by Sandelowski et al., 2007, pg. 107).

The frequency effect size of a certain finding is calculated by dividing the number of reports containing this finding by the total number of reports used in the synthesis. Care should be taken to subtract reports derived from a common parent study that represent a duplication of the same finding from both the numerator and the denominator of the calculation.

Data Collection and Analysis

The mixed research synthesis was conducted in two phases. The first phase involved sample selection and data collection. The second phase was the analysis of the collected data. The data analysis phase in itself was a four-step process. These steps included gathering and reading the studies, determining how the studies were related, translating the studies into one another, and finally synthesizing these translations (Bair, 1999). This process is akin to the process described by Voils et al. (2008) which includes extracting findings, grouping and abstracting these findings, calculating the effect sizes, and summarizing the results.

Sipe and Curlette (1997) maintain that it is necessary to identify as many studies related to the topic as possible during the literature search. These studies should include primary, secondary, and informal sources of information. Furthermore, a set of criteria should be set for doing the data search which includes the time range from which the studies are extracted. Bair (1999) expanded this set of criteria to include time-frame, clarity of results, relevance, and availability. While these criteria are appropriate, Sandelowski et al. (2007) cautions that no research should be excluded for reasons of quality and that the criteria for choosing studies should be biased towards inclusion, not exclusion.

Meanwhile, a time range for the data collection phase can be set. The beginning year for data collection was 1995 and the end year, the current one. This range was chosen because very little if any research is available on web-based learning prior to this date. The beginning year is of significance because of the emergence of Netscape Navigator, the first commercially available web browser. Furthermore, e-College (ecollege.com) emerged one year later as one of the first commercially available course management systems that have made web-based learning so popular.

The available electronic databases, the World Wide Web, and Google Scholar were used to identify as many studies as possible from the chosen time frame. Data sources included published articles, books, dissertations, reports, as well as papers presented at national conferences. Once the studies had been identified, the focus was narrowed down to something that could be managed within a reasonable time frame. Next, the studies were read and reread to note any similarities, common threads or themes within the works, and to determine the relationship of the studies to one another. In the following step, the studies were translated into one another and a whole was made up from the parts by synthesis. Finally, the synthesis was expressed in written form.

The final product and the presentation of the findings are presented in the form of a narrative and contain charts and figures to help illustrate the calculations and the significance of the findings. This narrative produced a set of key themes that were extracted from the studies being synthesized. These themes directly address the research questions and describe how the role of the online instructor and the necessary competencies required to fulfill this role has produced a set of obstacles that prevent many faculty members from venturing into online initiatives. The synthesis findings also underline the true barriers to faculty acceptance of online learning that still exist fifteen years later and how these perceived barriers can be reduced or removed. The final synthesis includes the set of faculty based recommendations necessary to sustain a successful online program and allow for a deeper understanding of the role faculty plays in web-based distance education. In turn, this new knowledge could be used by administrators and evaluators alike to evaluate and increase the effectiveness of online programs and initiatives.

Validity and Credibility

While no observations were conducted, the validity of the methodology that was used stems from the inclusion of all studies meeting the criteria. Moreover, the aggregative metasummary approach that was used exhibits quantitative logic where higher frequency findings are taken as evidence of a replication (Voils et al., 2008). This replication resembles the discovery of a pattern or theme in qualitative research and the claim to validity in quantitative research (Creswell, 2009).

The credibility of the research was achieved by validating the findings with a number of pronounced figures in the field. These figures will include personnel responsible for online education at ACICS in addition to online program directors and educators from schools that are currently accredited by ACICS. Claudia Wilroy, the Chief Executive Officer and the Director of Online Operations for the Santa Barbara Business College (SBBC), has been the executive responsible for the online division of SBBC since its inception in 2006. Dr. Jamie Morley, an ACICS commissioner, also reviewed the report and provided input on the outcomes of the investigation. Furthermore, Dr. Tom Wickenden, ACICS Deputy Executive Director, who had expressed the need to specify evaluation criteria for fully online programs, is aware of the scope of the research and its focus on online program accreditation and more specifically the role faculty has to play in this process. This need suggests that ACICS show interest in the conclusions that could help them with setting accreditation criteria for fully online programs.

Limitations

The research was limited to the studies selected and synthesized. Furthermore, the value of the findings was limited by the quality of the initial studies.

Resources

In order to complete the research it was necessary to have access to all possible studies to be synthesized in addition to the studies that cover all fields of investigation related to the topic. For validation purposes it was necessary to have access to and feedback from several directors of online schools as well as the personnel responsible for online education from ACICS.

Summary

There is little debate, if any, over the importance of institutional effectiveness plans in developing sustainable programs in the postsecondary environment. Some accrediting bodies, however, do not necessarily require separate plans that address the specific needs of online programs. Furthermore, many of these plans even if they exist do not explicitly address faculty issues.

The mismatch that exists between academic administration and the people who deliver the instruction creates the need to have administrators transfer ownership of the online initiatives to their faculty. This transfer can be achieved through the development of a set of guidelines that are based on faculty input and faculty needs. Consequently, in addition to the important components of student retention and graduate placement, institutional effectiveness should consider measurements of faculty satisfaction and faculty perceptions as a major component used in assessing the overall quality of online delivery.

An in-depth study, analysis, and synthesis of faculty concerns, perceptions, and issues related to teaching in an online environment was carried out in order to produce a set of recommendations that can be used to increase faculty awareness and acceptance of this mode of delivery. These recommendations, if implemented correctly, should help narrow the gap between how administrators of online programs and their faculty view web-based distance education.

Additionally, these recommendations could serve as a subset of the evaluation criteria used to evaluate online programs.

Chapter 4

Results and Discussion

This chapter describes how metasummary was used to address the four research questions posed in Chapter 1. Three key themes were identified as a result of the calculations used in the metasummary and by applying a frequency effect size to extract the most significant findings included in all the studies used to perform the mixed research synthesis. These three key themes include a set of de-motivators that prevented faculty from moving full-heartedly towards embracing online learning, a set of motivators that advanced the use of web-based education amongst faculty, and a set of solutions that could help overcome the de-motivators and promote the motivators.

The first step in the investigation was to identify all studies that fell within the time period and were related to the research questions. These studies were then compared to determine how they were related, translated into one another and then synthesized. Furthermore, a number of possible solutions to alleviate faculty concerns were either outlined directly in these studies or could be deduced from their translation into one another. The overall intent was to analyze all concerns perceived by faculty as being barriers preventing them from accepting online learning. This analysis helped to identify and focus on the major and real concerns that were common to all. Addressing these issues could provide solutions for policy and practice that would allow faculty to accept their new roles as online educators and equip them with the competencies necessary to fulfill these new roles.

The Education Resources Information Center (ERIC) was the primary database used to locate the studies that were related to faculty issues in web-based education between 1995 and

the present. Additionally, the following online journals and organizations were consulted and reviewed for online research articles: *The Online Journal of Distance Education Administration*, *the Journal of Applied Learning Technology*, and the Sloan Consortium. The set of keywords used for the article search was as follows:

(Distance education AND teaching) OR (distance education AND instruction) OR (distance education AND faculty) OR (distance education AND instructors) OR (online learning AND teachers) OR (distance education AND teachers) OR (online learning AND instructors) OR (online learning AND instruction) OR (online learning AND faculty) OR (online learning AND faculty) OR (online learning AND faculty) OR (online learning AND teaching) OR (online learning AND instruction) OR (online learning AND instructors) OR (web-based AND teachers) OR (web-based AND faculty) OR (web-based AND teaching) OR (web-based AND instruction) OR (web-based AND instructors)

The initial search of the ERIC database yielded 58,419 articles. After refining the search and excluding reports, books, encyclopedias, and other sources, 37,012 findings remained. These findings included 33,936 scholarly journals, 1,681 dissertations and theses, and 1,395 conference papers and proceedings. Further refinement was performed by excluding all non-English publications. This refinement reduced the findings to 36,973 which included 33,915 scholarly journals, 1681 dissertations and theses, and 1,377 conference papers and proceedings. Next, the publications were sorted by relevance and a further selection was performed based on the abstracts provided for each of these studies. During this step, 137 studies were selected from the first 1000, 60 from the second 1000, 47 from the third 1000, and 31 from the fourth. The remaining studies were discarded after finding the abstracts highly irrelevant to the current research. This selection process yielded a total of 275 studies.

The next step was to further examine each of these studies by printing and reading them. The goal was to determine the studies that addressed at least one of the four research questions

and to discard the rest. The studies that passed this test were categorized in several groups. The first of these groups combined studies that were centered on faculty issues and concerns. The second group of studies discussed possible means to encourage faculty and build a successful distance education program. The rest of the articles were discarded for a number of reasons. These reasons could be demographic in nature, for example K-12 studies or studies carried out in foreign countries with characteristics dissimilar to those existing in the United States. Another reason a study was discarded was related to the delivery medium such as studies that dealt with non web-based distance education. While acknowledging that each of the studies varied in its signal to noise ratio where the signal represents its informational value and noise is the methodological flaws it contained (Sandelowski et al., 2007), it should be noted that no study were discarded based on its quality.

Faculty Barriers

The 38 studies in Group A were related to faculty inhibitors and motivators. During the annotation of these studies, 11 others were identified through the references yielding a total of 49. They comprised a mix of quantitative and qualitative studies. However, the manner in which the findings were presented regardless of its methodology was similar; even the quantitative studies included findings that were presented in a descriptive manner. All contained one or more factors that could be considered de-motivators for faculty. A number also contained factors that could motivate faculty. Consequently, the factors addressed in the papers could either deter faculty from being involved in web-based learning or attract them towards such endeavors, respectively. Furthermore, virtually all of the qualitative studies presented these factors in a list form making them comparable to the manner in which they were presented in the quantitative studies. The main difference between the presentations in each of the two types of studies was

the absence of the number of faculty that considered each factor a concern or otherwise in the qualitative studies.

Over the course of the 15+ year span from which the articles were selected a number of barriers and concerns had been expressed by faculty members. Several of these de-motivators appear in a good percentage of the studies whereas others appear in only a few. A total of 17 different concerns were isolated across all the studies. In order to assess the significance of each of the faculty barriers the frequency effect sizes were calculated. This calculation was performed by dividing the number of reports containing a finding, which represented a specific concern, by the total number of participating reports (Sandelowski et al., 2007). Duplicate findings resulting from a common parent study were removed from both the numerator and the denominator. In essence, this approach assumes that the factors appearing in a majority of the studies are considered to be more significant than those that appear in only a few. For the sake of clarity it should be noted that the weight assigned to each of the de-motivators varied from one study to another in which they appeared. This difference in weighting was not taken into account when calculating the effect size. However, this weight was considered of significance when synthesizing these studies and integrating them into one another.

Table 1 shows the 17 primary barriers to the acceptance of online learning as perceived by faculty that appeared in the studies, the number of times each of these barriers appeared, and their effect size. A visual representation is shown in Figure 1.

Faculty Barriers	# of studies	effect size
technology limitations	17	34.70%
lack of technical support	16	32.70%
Quality	16	32.70%
fear of technology	15	30.60%
Time	14	28.60%
Workload	14	28.60%
lack of administrative support	12	24.50%
lack of interaction	12	24.50%
financial compensation	11	22.40%
ill-defined roles	11	22.40%
training issues	11	22.40%
tenure issues	8	16.30%
academic isolation	7	14.30%
Cheating	4	8.20%
student preparedness	4	8.20%
copyright issues	3	6.10%
intellectual property rights	2	4.10%

Table 1: Barriers impeding faculty acceptance of online learning

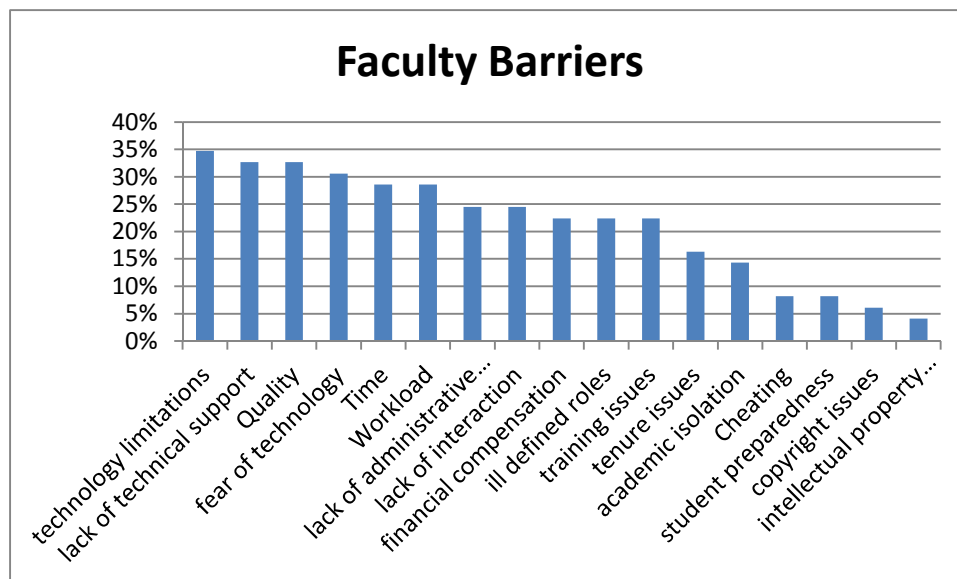


Figure 1: Barriers impeding faculty acceptance of online learning

The arithmetic mean of the effect sizes for all 17 faculty barriers was found to be 21.25%. This value corresponds to a faculty barrier appearing in more than 10 of the 49 studies that were selected for the synthesis. Accordingly, any concern or faculty barrier with an effect size at the mean or higher was considered to be a significant one and thus warrant further investigation. This significance implies that these concerns are true barriers to the majority of faculty and need to be overcome in order to achieve faculty acceptance of the online mode of learning.

The temporal distribution of the occurrence across the 15+ year span of each of these barriers was also considered critical in determining its importance. For example, a concern that has appeared a number of times that has exceeded the threshold may not be a potential barrier if the majority of the occurrences all took place in the early years of web-based delivery.

In light of these calculations and findings, the concerns that were considered significant comprised 11 barriers. These barriers in decreasing order of their effect sizes include technology limitations, quality, lack of technical support, fear of technology, workload, time issues, lack of interaction, lack of administrative support, ill-defined roles, financial compensation, and training issues.

Following the evaluation of the effect sizes, the specific studies in which each of the inhibitors appeared were translated into one another and then synthesized to determine how the factors were related. The following sections show the results of this synthesis for each of the significant barriers.

Barrier 1 - Lack of Technical Support

The lack of technical support has been an issue from the first surfacing of online distance education. In fact, this barrier has the largest effect size of all. This finding should not be unexpected taking into account the complex technological infra-structure around which web-

based distance learning is built. Furthermore, it is evident from the timeline shown in Figure 2 below that faculty perceive the lack of technical support just as great a barrier during the last several years as they did more than a decade ago.

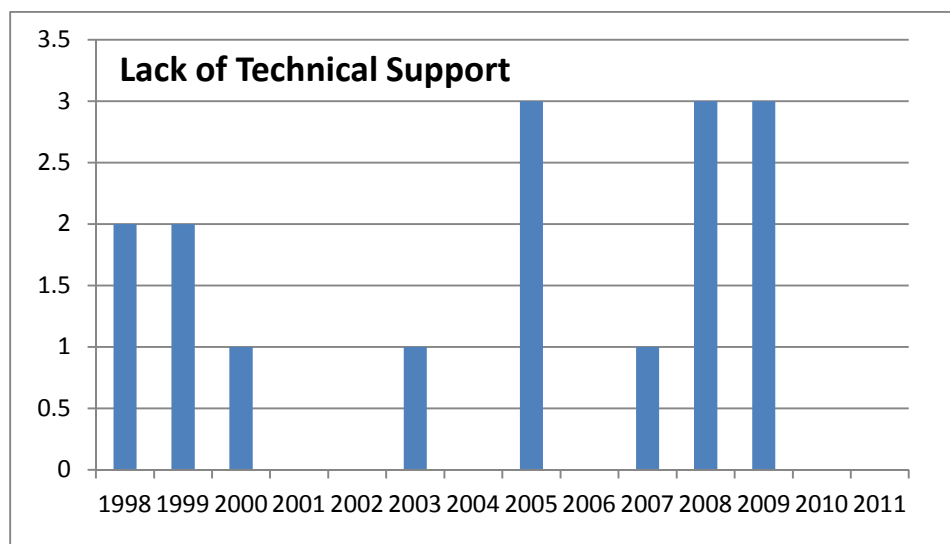


Figure 2: The Lack of Technical Support Barrier

Betts (1998) surveyed 532 full-time faculty teaching at George Washington University in the spring 1998 semester. The lack of technical support was found to be one of the top five factors that would inhibit them from participating in online learning. Shea, Pickett and Chun (2005) found that faculty members are more likely to participate in online learning and have a satisfactory perception when technical support is made available. More recently, a sample of more than 500 faculty members who were actively engaged in online teaching were surveyed in an effort to understand what factors directly impacted their involvement with online distance education programs. The results implied that institutional support was a major factor for almost half of the participants and that technical support for students and faculty alike should not be a burden that instructors have to be faced with (Green, Alejandro & Brown, 2009). In a similar

study, limited or no technical and help desk support was considered by faculty to be a major deterrent to effective online teaching (Haber & Mills, 2008).

In fact, the number of studies in which this concern appears suggests that even more emphasis has been placed on this barrier in the recent years. One cause for this added emphasis could be that more faculty members are teaching online. This rationale can be deduced from the increase in online course enrollment over the past decade. These enrollments have increased from 1.6 million students in 2002 to 6.1 million students taking at least one course online in 2010 (Allen & Seaman 2011, 2003). This increase represents approximately a 400% increase in student enrollment. Assuming equivalent class sizes the faculty required to cover these online classes would be four times what was sufficient in 2002. Most likely, a good percentage of these instructors, some of which may have been forced to teach online (Osika, Johnson & Buteau, 2009) do not have the technical skills that are necessary to maximize the learning made possible by the technological advances available in today's course management systems, let alone act as frontline support for students facing technical issues. Consequently, the availability of permanent technical support services to faculty is a requisite to influence faculty to embrace web-based education (Tabata & Johnsrud, 2008; Vodanovich & Piotrowski, 2005).

Barrier 2 – Training

Over the 15 year period that was tested, inadequate training was cited by many as being an obstacle that prevents faculty from migrating towards distance education (Fish & Gill, 2009; Haber & Mills, 2008; Lee, & Busch, 2005; Bower, 2001; Rockwell, Schauer, Fritz & Marx, 1999). This consistency across the time period is illustrated in Figure 3.

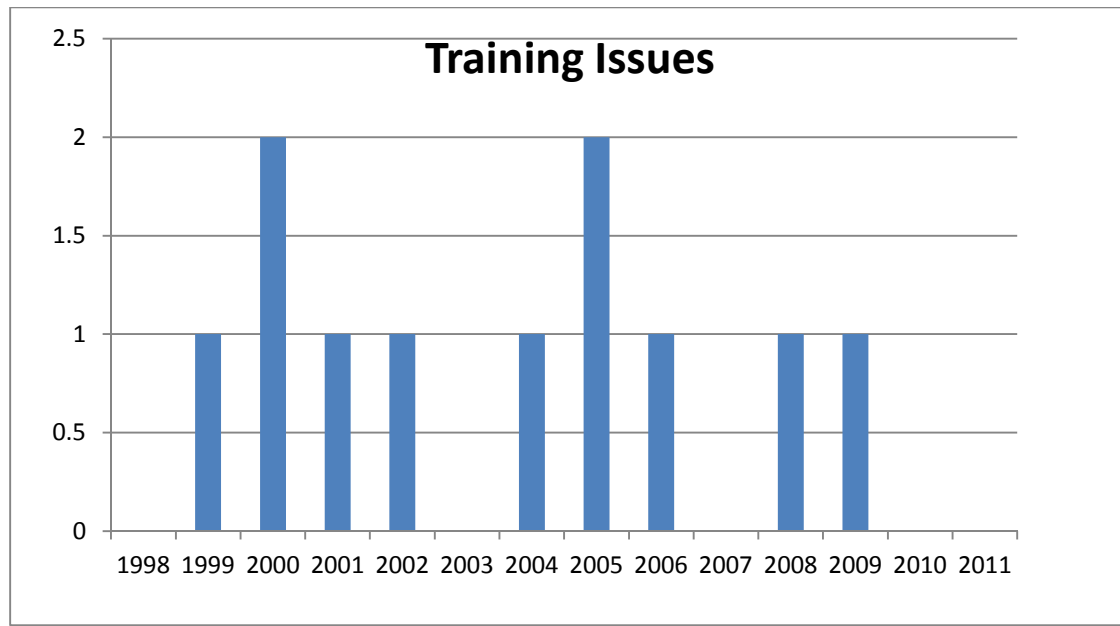


Figure 3: The training barrier has been a consistent one over the past 15 years

Bower (2001) maintains that faculty training is an essential component of institutional support. The administrations at educational institutions that are planning to offer web-based education must not rely on a “build it and they will come” mindset. Instead, online initiatives should be accompanied by strategies that encourage faculty participation. Adequate and effective training should be one of these strategies.

The lack of training is not a standalone issue. Training is related to other obstacles also considered as de-motivators by faculty. For example, the lack of training is linked to the time issue which some faculty perceive as one of the major barriers that deter faculty from participating in distance education (Shea, Pickett & Chun, 2005). Giannoni and Tesone (2003) indicate that the time issues related to training is one of the main obstacles to faculty participation in distance learning.

Other faculty barriers directly linked to the lack of training concern are ill-defined roles and the fear of technology. Falowo (2007) concludes that training is necessary in order to acquire the basic skills necessary to teach web-based distance learning. However, Shedletsky

and Aitken (2001) indicate that faculty tends to avoid workshops where they might feel ignorant or overwhelmed about computing in addition to avoiding situations where they are told what to do by technical and support staff. This reluctance implies the need to provide technical and technological awareness prior to any attempt at training faculty on how to build and teach classes online. Furthermore, Choi and Park (2006) suggest that instructors should not be expected to automatically adapt to their new roles but need adequate and effective training to do so. O'Quinn and Corry (2002) raise an issue regarding the type of training faculty receive noting a focus around content as opposed to curriculum and lesson planning. In order for training and support programs to be effective they need to provide ongoing and sustained assistance as well as just in time assistance to faculty whether in the design and development or the implementation phase (McCord, 2006).

Results of a study carried out by Vodanovich and Piotrowski (2005) indicate that one major problem perceived by faculty venturing into web-based education is a lack of formal training. In the latest Sloan Consortium report 6% of academic leaders report that their distance education faculty receives no training. Furthermore, of the faculty receiving training 72% is internally run and 58% is in the form of informal mentoring (Allen & Seaman, 2011). Tabata and Johnsrud (2008) indicate that the training requirement holds implications for policy as well as for practice. In regards to policy, formal faculty training and development programs must be part of the administrative and organizational infrastructure of any distance learning initiative. Practically, training related implications could include allowing administrative leave time for training, offering both in-house and consultant based workshops, providing monetary support for off campus training, having resource material available, sharing best practices through the use of

faculty oriented websites, and instituting other means of formal training such as holding campus tech days (Vodanovich & Piotrowski, 2005).

Barrier 3 – Quality of Education

Quality is one of the major issues that has been associated with distance education in general, and web-based distance learning in particular since its onset. This association is evident from the number of studies that have recorded this factor as a concern. This evidence is shown in Figure 4 below.

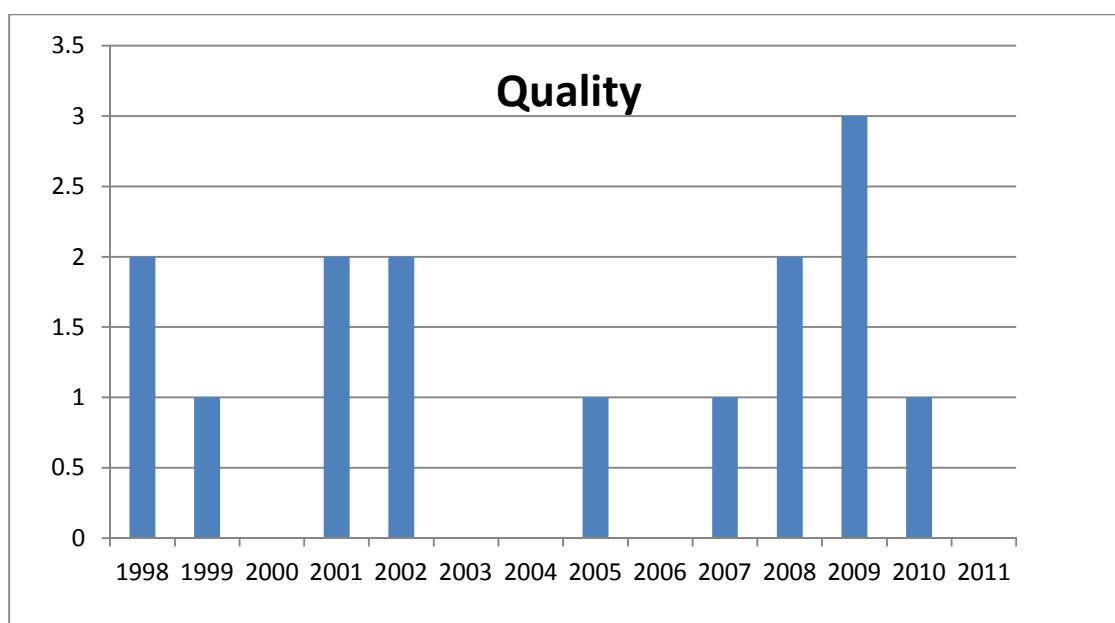


Figure 4: Quality of Education as a Barrier

More specifically, the results of an institution-wide study conducted by Betts (1998) indicated that quality was a major factor influencing faculty participation in distance education for both participants and non-participants in this mode of delivery. Rahman (2001) concluded that supporters of distance education believe in its educational quality while detractors did not. Bower (2001) suggested that while faculty may have individual reasons for resisting distance education, the question of quality is one reason why faculty as a whole resists it. O’Quinn and

Corry (2002) maintained that the quality of distance education was a concern to traditional faculty. More recently, Parthasarathy and Smith (2009) indicated that instructors in postsecondary education were concerned with both the rigor and the comprehensiveness of online learning programs. Bhati et al. (2009) voiced faculty concerns about retaining the essence of the learning content when teaching online courses.

There are a multitude of reasons why faculty may perceive online learning as lacking in quality. The concept of the learner as a consumer and information as a commodity is a hard pill to swallow for many in academia because many view the business model of education as being an obstacle to true scholarship (Chau, 2010). Many faculty members view online learning with suspicion because it is offered by divisions of extended study or continuing education and delivered by adjunct faculty with no terminal degrees (Yang & Cornelious, 2005). Other instructors who oppose online education see it as inferior to onsite learning in quality and consider it solely as a means of making a profit. Bhati et al. (2009) fear the loss of the essence of learning when mixing technology with pedagogy. Other faculty may be guilty of reducing quality themselves by lowering expectations because of technology problems (Hillesheim, 1998).

Nonetheless, the issue of quality is not viewed as a negative by all academic faculty. In a study carried out by Daugherty and Funke (1998), almost one third of the 76 university faculty members who participated cited improved learning as one of the positive outcome of web-based education. Clay (1999) indicated that one of the top motivators for faculty in distance education was increased quality. These responses have an increased significance when one acknowledges that web-based learning was still in its infancy. More recently, Fish and Gill (2009) maintain that the higher order thinking made possible by this mode of learning is a motivator for faculty to teach online.

Moreover, the definition of quality itself and the means by which to measure it have always been a dilemma. In 2002, the Sloan Consortium (www.sloanconsortium.org) defined five pillars that could be used as a framework for measuring and improving online programs (Lorenzo & Moore, 2002). These five pillars of quality for online education included learning effectiveness, student satisfaction, faculty satisfaction, cost effectiveness, and access.

Furthermore, when an online education program is evaluated there is a need to determine what its key performance indicators are. These indicators represent variables that can be measured during a program evaluation to produce statistical data that can be used in turn to determine the success of a program. These key indicators can also provide a frame of reference for strategic planning cycles and can be used as an institutions performance management framework. Rovai, Ponton and Baker (2008) suggest that the variables that can be used to measure the quality of an online program include technology factors, faculty training, content, interaction, student enrollment, support services, engagement, peer and student evaluation, persistence (course and program completion), and student achievement. Chaney et al. (2009) generated a list of quality indicators that had a lot of common ground with the set of key indicators suggested by Rovai et al. (2008). These commonalities include reliable technology, faculty training and support, student support, and institutional support and resources in general.

It is conceivable that the issue of quality has been an ongoing debate among faculty for more than a decade. Sellani and Harrington (2002) cite the lack of data to support claims as to whether the outcomes of distance education were the same, better or worse than traditional methods. Additionally, concerns related to student outcomes and learning continued to persist among faculty, although indicators existed that online was just as good if not better than traditional learning methods (Allen & Seaman, 2006). Nora and Snyder (2009) report that

although many in academia tout the impact of e-learning on improving academic performance, there are opponents of this theory that indicate that web-based learning is merely acceptable when compared to traditional learning methods. While several studies highlight the benefits of web-based learning and its positive impact on academic achievement and student persistence, other studies showed mixed findings on the use of technology in education. Furthermore, several studies reveal a negative association between e-learning and student achievement. These mixed results may imply that not enough is known about the benefits of technology on student outcomes and there is a need for more empirical and theory-based investigations to clarify the link between online learning and student performance. However, according to the results of a meta-analysis conducted by the Policy and Program Studies Services of the U.S. Department of Education, there is consensus that that online learning can provide a learning experience that is superior to traditional education (Means, Toyama, Murphy, Balia, & Jones, 2009). One of the key findings of this meta-analysis indicates that students who attend part or all of their classes online, perform better, on average, than students who attend the same classes through traditional face-to-face delivery methods.

Perhaps, this last report (Means et al., 2009) will put all the questions surrounding the quality of online learning to rest. Whether this occurs or not is yet to be seen.

Barriers 4 and 5- Fear of Technology and Technology Limitations

While these two barriers were measured separately when calculating effect sizes it is more appropriate to address them as one. In fact, when considered together the barriers surrounding the technology issue far exceed any of the other barriers in significance.

Web-based education is built around technology. If not for the technological advances that have occurred over the last 20 years, online learning as we know it today would never have

become possible. When reviewing Figure 5 below that represents instructors' fear of technology, it is apparent that this fear has become more pronounced in recent years than it ever was before. One reason for this increased fear could be that the systems and technological infrastructures behind web-based learning have grown even more sophisticated. Faculty members, especially those who have never ventured into this realm before, find it increasingly more difficult to do so now.

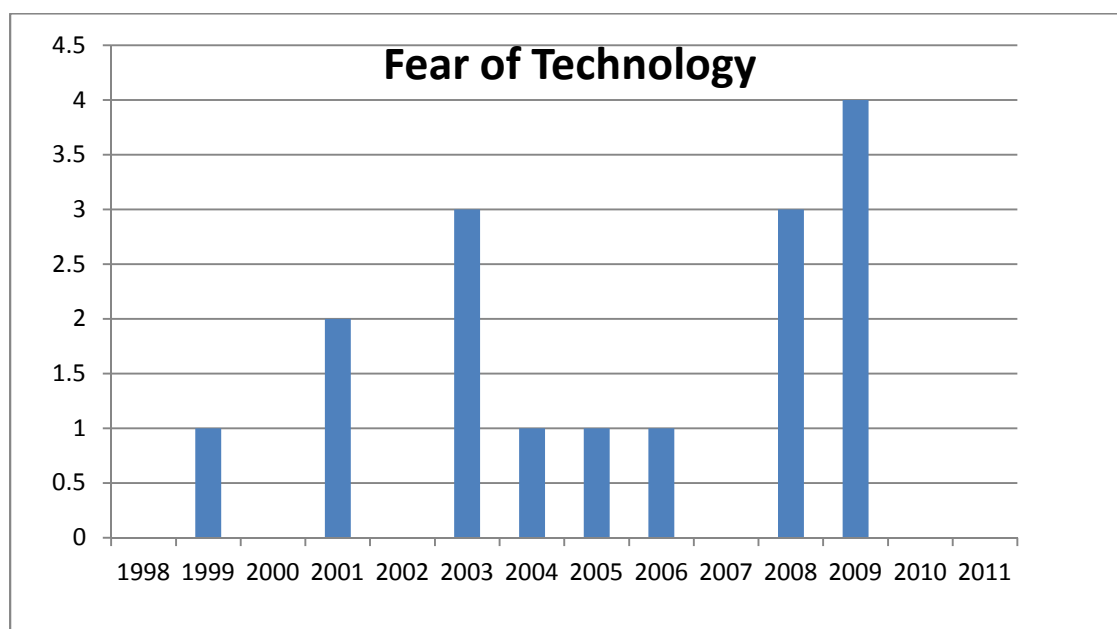


Figure 5: The Fear of Technology Barrier

While the introduction of technology into the learning process may serve as a motivator for some faculty (Green et al., 2009; Shea et al., 2005; McKenzie, Mims, Bennett, & Waugh, 2000; Betts, 1998), an even larger number see it as a barrier. Rockwell et al. (1999) maintain that developing effective technology skills is an obstacle influencing higher education faculty to teach via distance. Giannoni and Tesone (2003) cite the possession of technical savvy as a requisite in distance education faculty. Personal attitudes towards technology adoption are an intrinsic or internal motivator that influences faculty on whether to support a new online initiative or not (McCord, 2006). Liaw, Huang, and Chen (2007) concur that one of the major

factors that influence an individual's usage of information technology is his personal attitude towards the technology suggesting that primary dependence of an effective learning environment is not in the media or technology used but rather on positive attitudes towards that technology.

The personal attitude towards technology factor is associated with two other internal factors which are competency and computer apprehension or anxiety (Osika et al., 2009). This apprehension or fear of technology has become even more prevalent recently (Lee, & Tsai, 2010; Chen, 2009; Orr, Williams & Pennington, 2009; Bhati et al., 2009; Gibson & Harris, 2008). Consequently, faculty who use technology have a different outlook than those who have not (Osika et al., 2009). Tabata and Johnsrud (2008) suggest that the more technologically competent the instructor, the more acceptable to distance education.

The limitations of technology and the technical problems associated with it also provide cause for faculty hesitance when moving towards online learning. Communication problems associated with technology issues such as email (Collis & Nijhuis, 2000) and course management systems (McKenzie et al., 2000) are an example of technology limitations. Daugherty and Funke (1998) cite the lack of equipment and software as another example. Ross and Klug (1999) considered student access to library and other support services as another difficulty perceived by faculty.

Technical problems have and will always exist. Furthermore, technology will always have limitations. However, the scope of this concern has lessened. Figure 6 below indicates that the number of studies that consider technology limitations has decreased with time, most likely because of the technological advances that have taken place in the field. Nonetheless, these limitations are still cited by a number of recent studies. Gibson and Harris (2008) report that faculty express concern with the online model because of the technology problems associated

with delivery. These technology problems cause student frustration and lead to poor evaluation of faculty. Bolliger and Wasilik (2009) maintain that using reliable technology and experiencing difficulties with technologies are two of the top instructor-related issues associated with online teaching.

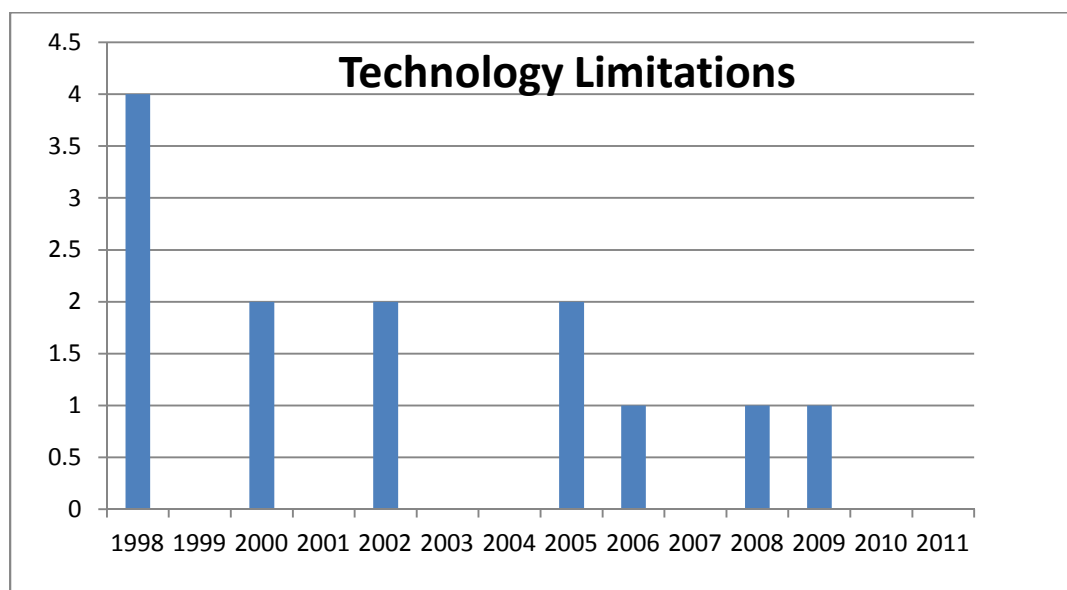


Figure 6: Technology Limitations as a Barrier

The technology issue is also linked to other issues perceived by faculty as barriers. The quality of online learning is the first of these issues. Hillesheim (1999) indicated that technology limitations may distort the quality of learning because faculty may lower expectations because of technical problems. Vodanovich and Piotrowski (2005) suggest that limited faculty technical knowledge may cause online courses to have a technological rather than a content focus. Bhati et al., (2009) maintain that online instructors fear losing the essence of learning when mixing technology with pedagogy. Furthermore, it appears that some academic institutions introduce numerous technologies into their online programs in a haphazard manner causing confusion among faculty on which of these technologies to choose and implement in their courses.

The second faculty barrier linked to technology is time. Shedletsky and Aitken (2001) suggest that one of the paradoxes of online academic work is the amount of time required to implement the technology. Moreover, Appana (2008) indicated that one of the limitations of distance education from the point of view of the faculty is the extra time required to learn the technology in order to implement it.

Barrier 6 – Ill-Defined Roles

Perhaps one of the most significant barriers facing faculty acceptance of online learning lies within what is expected from the distance educator. Many recent studies express concern over the altered and sometimes ill-defined instructor role associated with this delivery mode (Batts et al, 2010; Neely & Tucker, 2010; Bhati et al., 2010).

The graph shown in Figure 7 below indicates that the issue of ill-defined roles has been increasing in importance and significance. One reason for this increased importance is very likely because more and more faculty are being subjected to this mode of learning. Ocak (2011) indicated that faculty required to teach online are voicing concerns regarding the changing roles associated with the complexity of the instruction method and the lack of upfront planning and preparation they are often confronted with. Instructors must incorporate new administrative and organizational procedures to meet the online requirements. Overall, faculty is concerned over being given more administrative tasks and even clerical ones in the operation of their courses (Appana, 2008; Haber & Mills, 2008). This issue is not a new one. Since its inception, the new roles imposed upon online instructors have caused reluctance to adopt web-based education (Bower, 2001; Collis & Nijhuis, 2000; Clay, 1999; Daugherty & Funke, 1998).

Bower (2001) suggested that changes in interpersonal relations with students is a factor that deter faculty from participating in distance education suggesting that personal interaction is

one of the most gratifying aspects of teaching. Faculty is used to the sage on the stage style of teaching and find it hard to be a mere facilitator. Furthermore, many instructors find it foreign to plan interactive strategies in advance of course delivery since in their traditional roles they are used to visual cues during the lecture.

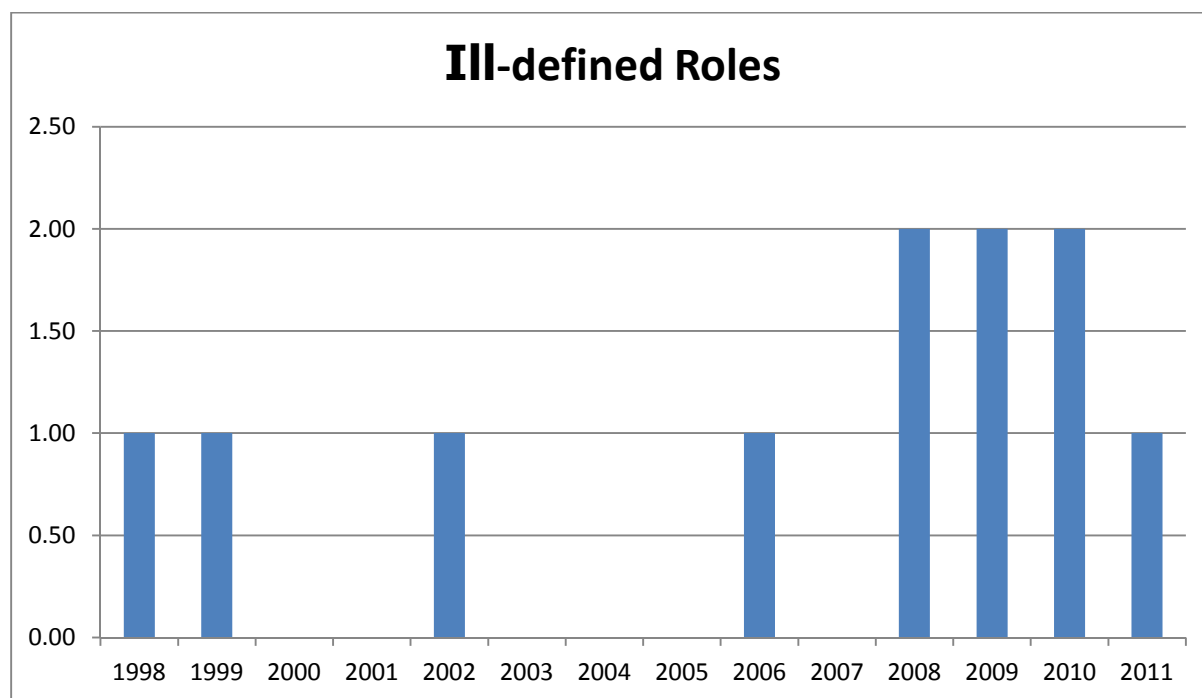


Figure 7: The Ill-Defined Roles Barrier

Other problems with web-based courses include preparation problems associated with building the online course, course formatting issues, timely feedback issues, class monitoring problems, and administrative issues such as maintaining student records online (Collis & Nijhuis, 2000). One must acknowledge that many of these record keeping issues have been resolved by advances in technology and course management systems. However, new problems have emerged.

Daugherty and Funk (1998) suggest that personal characteristics are deemed critical for web-based education. Such characteristics include patience, perseverance, flexibility, willingness

to experiment, willingness to ignore technology anxiety, and a good sense of humor.

Additionally, the ability to communicate is one characteristic that is a critical one to ensure that conversations in threaded discussions are not taken out of context or misconstrued (Hillesheim, 1998). Siedlackczek (2004) concurs that excellent writing skills are a necessary competency.

This issue may seem to be a trivial one because teachers are expected to be excellent communicators especially in the verbal sense. However, this is not necessarily true in the case of technical courses such as mathematics and computer programming, especially when many for-profit technical educational institutions depend heavily on adjuncts and may not consider this attribute as necessary as technical expertise.

The lack of training barrier is directly related to that of ill-defined roles. Choi and Park (2006) maintain that instructors should not be expected to automatically adapt to their new roles but need adequate and effective training to do so. Furthermore, O'Quinn and Corry (2002) maintain that traditionally faculty is generally trained in content rather than in curriculum and lesson planning.

Barrier 7 - Lack of Administrative Support

According to the latest Sloan Consortium report, Chief Academic Officers indicate that only a little over one third of their faculty accept the legitimacy of online learning (Allen & Seaman, 2011). One reason for this denial is the lack of administrative support (Ocak, 2011; Lei & Gupta, 2010; Clay, 1999; Daugherty & Funke, 1998). Figure 8 below shows that this issue has been a relevant one especially in recent years. However, some studies indicate that it has not been a major concern for most faculty. Bolliger and Wasilik (2009) indicated that institution related factors stood in third place as compared to student and instructor related factors.

However, for the purposes of this discussion, it should be noted that technical support was considered to be separate from administrative support.

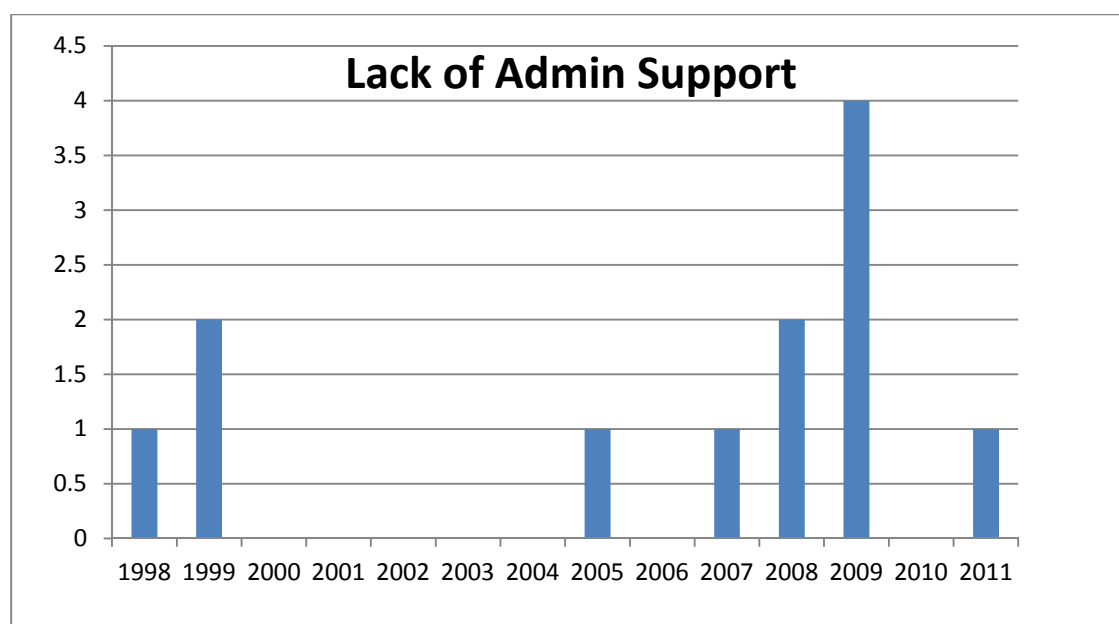


Figure 8: Lack of Administrative Support as a Barrier

In fact, what constitutes administrative support differed from study to study. Bower (2001) considered institutional support to include salary, promotion and tenure, workload, and training. Several of these issues will be discussed further as a stand-alone barrier. Lee and Busch (2005) found that faculty was more willingly to participate in online learning when institutional support along the lines of adequate training and recognition for their efforts were made available. McCord (2006) considered compensation, release time, and recognition as main components of administrative support. Meyer and Barefield (2010) extend administrative support to include program policies, faculty incentives, faculty development and mentoring programs, and proper course management system selection.

O'Quinn and Corry (2002) suggest that the administrative structure at an institution may also deter faculty from participating in online learning. For example, some administrations may

expect faculty to develop distance courses on their own time. Others may not allow administrative leave for training (Vodanovich & Piotrowski, 2005). Some institutions may even pressure their faculty to teach online in spite of their reluctance to do so (Osika et al., 2009). If no strong and supportive infrastructure exists then faculty are not motivated to teach online (Tabata & Johnsrud, 2008). This infrastructure should allow for a mission and policies that support online pedagogy (Bhati et al., 2009). Furthermore, for administrative support to be effective it must be ongoing. Support programs need to provide sustained assistance to faculty during initial program and course development and continue on through the implementation phase (Meyer & Barefield, 2010; Appana, 2008).

Barrier 8 - Workload

O'Quinn and Corry (2002) reported that one of the factors that imposed the most concern to all faculty whether teaching traditional, online, or hybrid classes, was the workload. Rahman (2001) cautioned against giving faculty too much overload in the form of online courses. Sellani and Harrington (2002) considered a payment differential is necessary to sustain excellent faculty in the case of overloads. Giannoni and Tesone (2003) were concerned about the time issues related to these increased workloads.

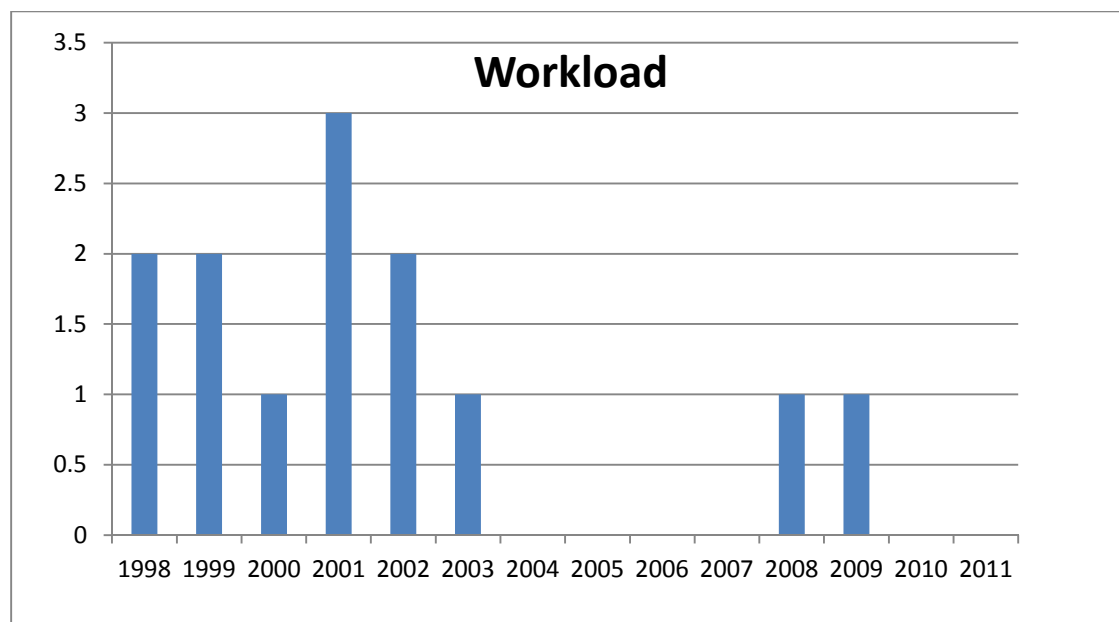


Figure 9: Workload as a Barrier

Consequently, the graph in the figure above suggests that workload was more of an issue in the earlier studies (Huett & Young, 2004; Bower, 2001; McKenzie et al., 2000; Clay, 1999). While several later studies did consider workload as a faculty concern (Green, 2009; Bolliger and Wasilik, 2008), it was considered of less importance especially when measured against the more significant student-related benefits of online learning. This finding coincides with suggestions made by Shea et al. (2005) regarding the issue of time which is discussed in the next section.

Barrier 9 - Time concerns

As may be seen from Figure 10 the time associated with teaching online is an issue associated with the majority of the studies. It has been perceived by faculty as even a greater barrier within the last three years (Ocak, 2011; Green, 2009; Haber & Mills, 2008; Tabata & Johnsrud; Rahman, 2001).

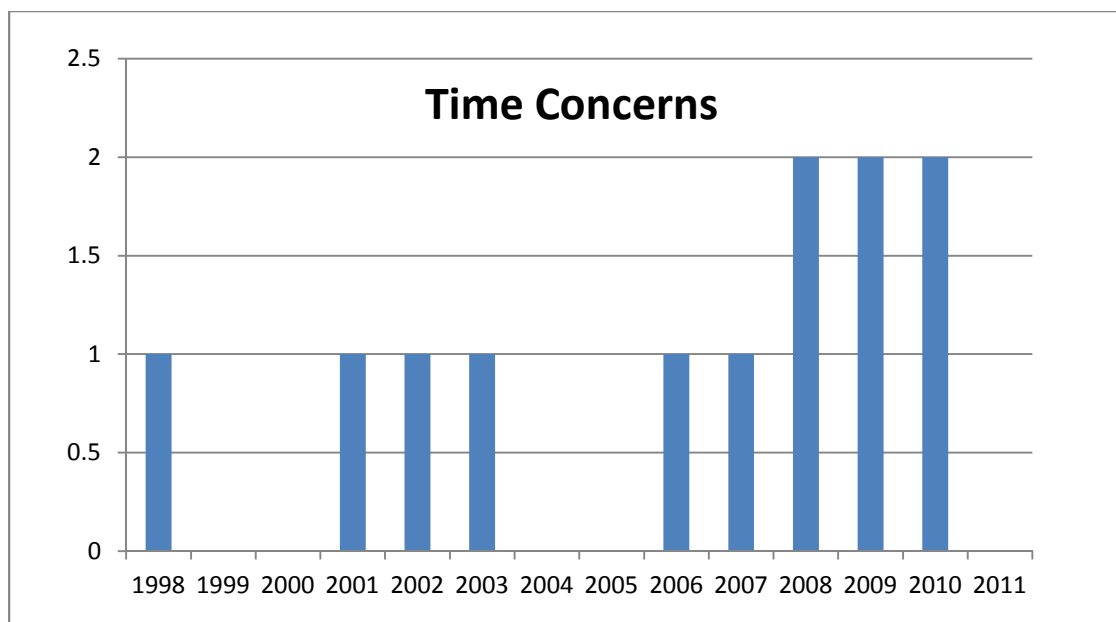


Figure 10: The Time Barrier

The time factor includes the time requirements for a number of different aspects of the online teaching cycle. These aspects include course development (Lei & Gupta, 2010; Fish, 2009; Hunt, 2009), course preparation (Daugherty & Funke, 1998), course delivery (Hunt, 2009), time to learn the technology (Appana, 2008; Shedletsky & Aitken, 2001) or course management system (McKenzie et al., 2000), time to implement the technology (Vodanovich & Piotrowski, 2005), the time required for communication (Falowo, 2007), and time from research (Rockwell et al., 1999). Furthermore, the studies suggest an overwhelming agreement to provide release time for faculty to perform these duties (McCord, 2006; Gianni & Tesone, 2003; Sellani & Harrington, 2002; McKenzie et al., 2000; Clay, 1999; Betts, 1998).

Nonetheless, some research indicated that more time required to teach online did not necessarily make the faculty more resistant to this mode of learning (Lee, & Busch, 2005). Additionally, Shea et al. (2005) found that the time levels seem to be equivalent for traditional and online learning and according to their research, the time factor was found to be a non-significant one for faculty. In fact, Bender, Wood and Vredevoogd (2004) indicate that

comparative data based on daily time logs suggests that teaching a distance education course is less time consuming than a comparable course with a lesser degree of technology.

Barrier 10 - Lack of Interaction

As illustrated in Figure 11, a significant number of the studies concur that the lack of interaction, body language, and visual cues is one of the primary de-motivators that prevents faculty from accepting online distance education (Hunt, 2009; Haber & Mills, 2008; Choi & Park, 2006; Totaro, Tanner, Noser, Fitzgerald & Birch, 2005; Vodanovich & Piotrowski, 2005; Siedlackczek, 2004; Ross & Klug, 1999). Hillesheim (1998) suggests that such faculty concerns revolve around the difficulty to communicate effectively in a non-continuous mode, drawn out discussions, and the inability to provide feedback in a timely fashion. Additionally, software limitations, course management system capabilities, and other technology issues cause communication problems that make the lack of interaction barrier an even harder one to overcome (Collis & Nijhuis, 2000). Bower (2001) maintains that distance education eliminates personal interaction which is one of the most gratifying aspects of teaching.

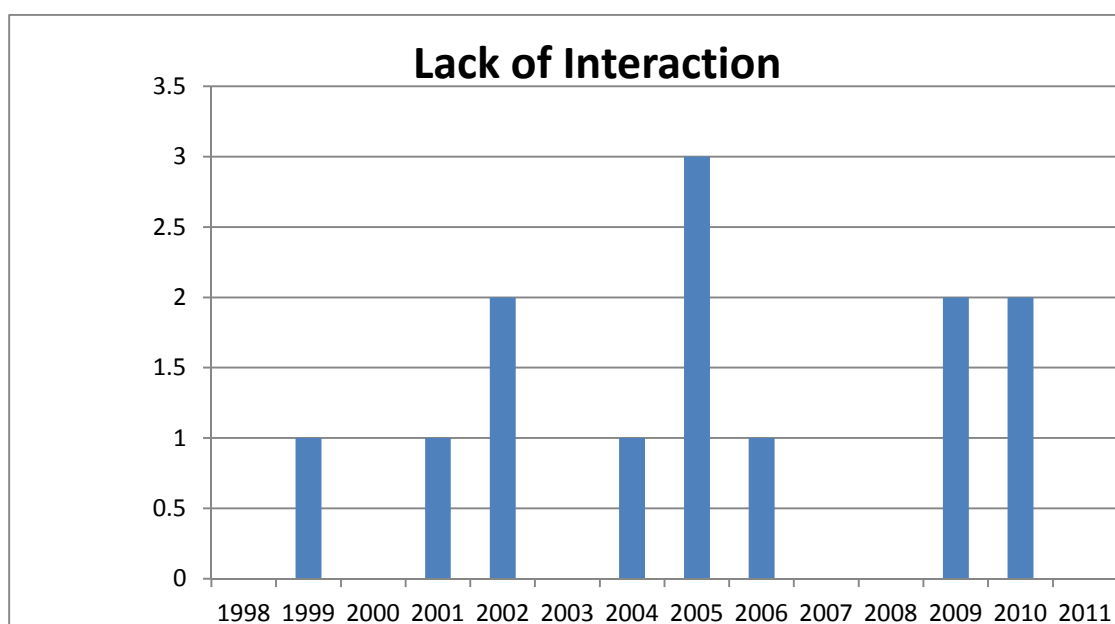


Figure 11: Lack of Interaction as a Barrier

Meanwhile, a good number of studies characterize interaction as one of the positive aspects of web-based education. Daugherty and Funke (1998) tout improved communication, while McKenzie et al. (2000) suggested that faculty choose online teaching because it allows them to interact with students more frequently. Even in the early stages of distance education where asynchronous discussion was introduced to students through the use of a computer and a modem, the interaction made possible through this method of delivery was seen as positive (Krueger, Porter & Burke, 1998). Siedlackczek (2004) concluded that one of the benefits of online learning was the ability to facilitate group discussion in a more effective fashion than what was possible in a traditional classroom. Furthermore, the results of a quantitative study carried out by Bolliger and Wasilik (2009) found that student related issues such as access to their courses and faculty as well as improved interaction were a positive factor that motivated faculty to adopt online learning.

Lei and Gupta (2010) maintain that while web-based education provides better opportunities for interaction poor writing makes the absence of social cues a concern. One problem stemming from this concern is that instructors need to differentiate between course objectives and the writing objectives during evaluation and assessment. Osika et al. (2009) agree that no face to face interaction was a deterrent for faculty mainly because student abilities were a concern. Furthermore, excellent writing skills are a necessary skill to have and while most faculty may have such abilities, many students do not.

Consequently, while web-based education can provide greater and higher quality interaction, this assumption is not a given one. Such improved communication capabilities can only take place when course design, development, and delivery requirements make it so, which in turn implies that policies and procedures must exist to enforce the process. Overall, Shea et al.

(2005) found that instructors are more likely to participate in online learning and have a satisfactory perception of this type of instruction when high levels of interaction exist in the course.

Barrier 11 - Financial Compensation

Faculty teaching online have always considered financial compensation a major factor. This compensation that could include salary, stipends, promotion, and tenure (McCord, 2006; Shea et al., 2005; Huett & Young, 2004; Sellani & Harrington, 2002; Bower, 2001). Betts (1998) indicated that non-participants in distance education considered an increase in salary and stipends for overloads a necessary requisite for participation. Meanwhile, instructors already participating in distance education complained about lack of grants for expenses that may be incurred as a result of teaching or developing an online course. Clay (1999) maintained that rewards and incentives are also important for preventing first time instructors from losing motivation. These incentives could include stipends for greater class loads, more release time, administrative support funds to attend conferences, formal and informal recognition and rewards.

Osika et al. (2009) indicated that monetary awards were more important to faculty who had never used technology when compared to those who had already been exposed. Bolliger and Wasilik (2009) suggested that compensation was not as important a factor to faculty when compared to other issues such as student access and reliable technology. Conversely, Haber and Mills (2008) argued that faculty perceives appropriate compensation as being much more critical than other factors. Additionally, O'Quinn and Corry (2002) suggested that the lack of monetary support or a stipend was seen as a major factor by faculty even those who were already teaching online.

Similarly, Tabata and Johnsrud (2008) maintained that main faculty barriers included rewards, incentives, promotion, and tenure and that such barriers hold significant implications for policy as well as practice. One of these practical applications as reported by Vodanovich and Piotrowski (2005) was to provide monetary support for off campus training.

Green et al. (2009) suggested that one of the discouraging factors affecting the retention of experienced faculty in distance education programs was the lack of sufficient financial compensation. This factor had especial effect on adjunct faculty who are particularly motivated by the possibility of increasing personal income. Giannoni and Tesone (2003) concurred that monetary rewards were more important to junior level and adjuncts than to senior faculty. Figure 12 indicates that financial compensation which may be of no major consequence to some is still a significant factor in the eyes of many faculty.

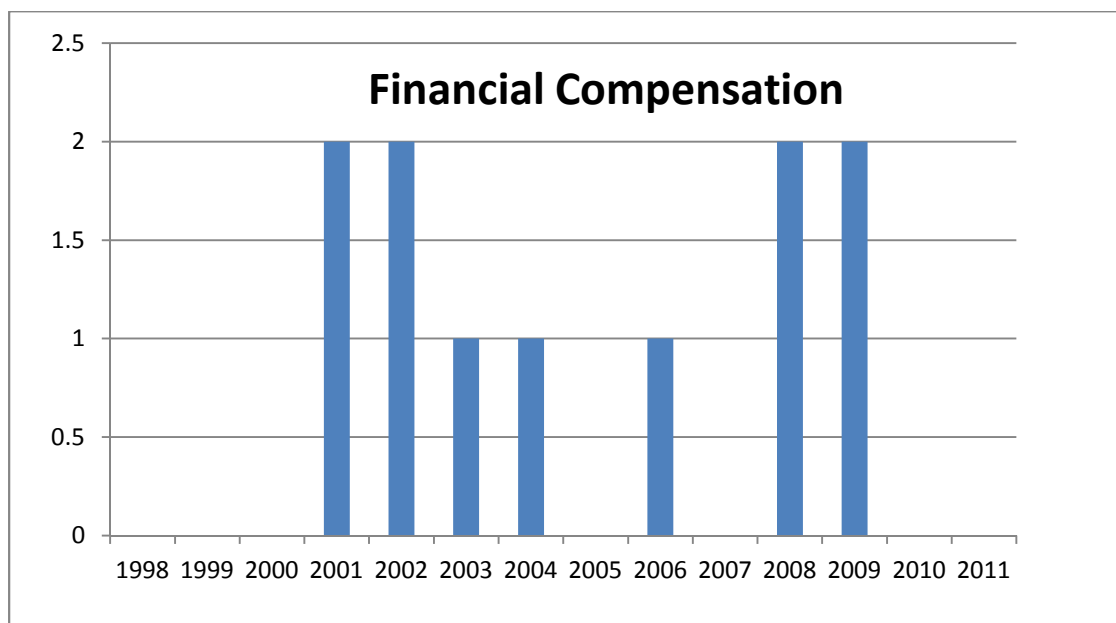


Figure 12: Financial Compensation as a Barrier

Other Concerns and Barriers

Over the span of the last decade and a half a number of other issues and concerns have been recorded. These concerns have also been categorized as faculty barriers to the acceptance of online learning. However, since the effect size of these barriers was lower than the threshold of what was considered to be significant less consideration has been given them. These factors include student preparedness (Lei & Gupta, 2010), cheating (Fish & Gill, 2009; Totaro et al., 2005; Sellani & Harrington, 2002), academic isolation (Lei & Gupta, 2010; Haber & Mills, 2008; Falowo, 2007; Vodanovich & Piotrowski, 2005; Clay, 1999), tenure issues (Tabata & Johnsrud, 2008; Falowo, 2007; McCord, 2006; Huett & Young, 2004; Bower, 2001), intellectual property issues (Shea et al., 2005; Giannoni & Tesone, 2003), and copyright concerns (Haber & Mills, 2008; Falowo, 2007). All of these factors have effect sizes smaller than 20% and while this value signifies that they are less important to faculty than the other barriers described earlier, there is still a need to address them properly. Most of these issues have direct implications for policy and the solutions and recommendations section below will discuss how to overcome these issues in more detail.

Several other issues emerged from the 49 studies selected for the meta-synthesis which were more isolated in nature. While these issues may have been considered major at the time of their recording they have since diminished in importance primarily because of advances in technology. For example, Landstrom (1995) indicated that the logistics of sending and receiving assignments is a faculty de-motivator due to the frustrations it causes to both instructors and students. Collis and Nijhuis (2000) described other issues associated with online course administration such as email, monitoring concerns, and record keeping. Vodanovich and Piotrowski (2005) added archival and retrieval concerns to the list. Most of these latter concerns have been resolved with the advanced capabilities of existing course management systems.

Another example of an obstacle to online teaching reported by Ross and Klug (1999) was access to library services. This issue has also been resolved with the abundance of online library services and databases that an online program can subscribe to. In fact, many of these virtual services have gained dominance among traditional face to face institutions as well.

A number of other isolated concerns were also raised in the 49 selected studies. Vodanovich and Piotrowski (2005) cited lack of privacy as an issue. Totaro et al. (2005) suggested that online instruction deprived both teachers and students of a structured classroom environment. They further suggested that the online environment made it difficult to teach quantitative courses. In fact, these issues should be addressed during the course design and development phase which makes the case for an institutional plan that mandates the use of an instructional design team to build their courses a strong one.

Faculty Motivators

While each of the 49 studies included in the meta-synthesis outlined a number of faculty barriers and obstacles to online learning, almost one half of these studies also listed a number of factors that could be considered faculty motivators. Specifically, 22 of the studies contained a total of 19 different motivating factors. Using the same method that was used to find the effect size for the faculty barriers, the effect size for each of these positive indicators was calculated.

Table 2 shows the 19 factors perceived by faculty as motivators to pursue online teaching, the number of times each of these motivators appears in each of the 22 studies, and their effect size. A chart which shows a visual representation of these factors is given is shown in Figure 13.

Faculty Motivators	# of occurrences	effect size
improved communication	7	31.82%
increased flexibility	7	31.82%
Motivation to use technology	7	31.82%
access to remote students	5	22.73%
increased quality (higher levels of learning)	5	22.73%
Intellectual challenge	4	18.18%
opportunity for recognition	3	13.64%
Opportunity for research	3	13.64%
Ability to reach new audiences	2	9.09%
exposing students to technology	2	9.09%
providing innovative instruction	2	9.09%
Financial reward	1	4.55%
accommodating a variety of learning styles	1	4.55%
career development and enhancement	1	4.55%
opportunity to use support services	1	4.55%
Opportunity to work with more motivated students	1	4.55%
Overall job satisfaction	1	4.55%
reduced travel	1	4.55%
required by administration	1	4.55%

Table 2: Motivators influencing faculty acceptance of online learning

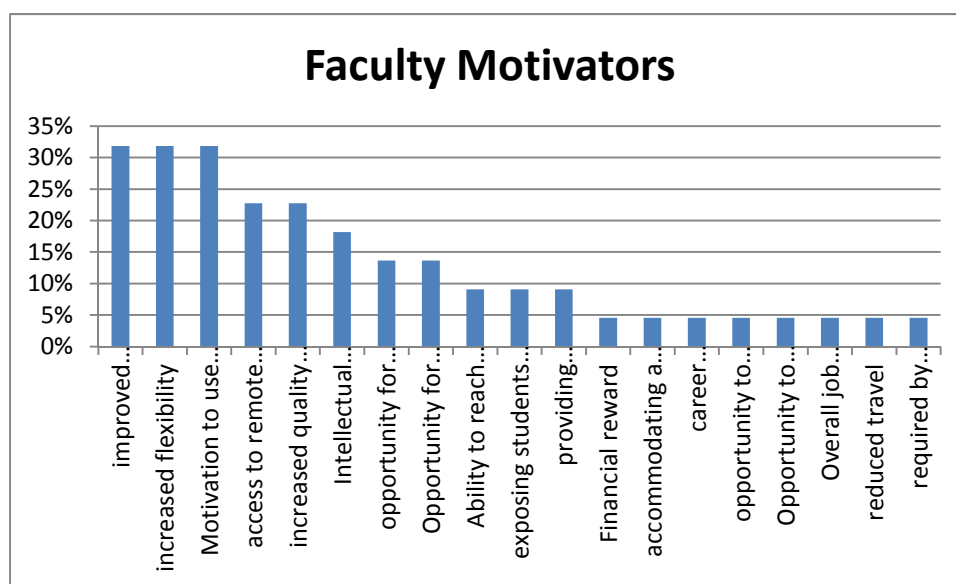


Figure 13: Motivators influencing faculty acceptance of online learning

The arithmetic mean of the effect sizes for all 19 faculty motivators was found to be 12.68%. This value corresponds to a positive factor appearing in more than 2 of the 22 studies that were selected. While the arithmetic mean was the threshold used to represent significance when analyzing the faculty barriers, it represented a value which was close to one fourth of all the studies. For the case of faculty motivators it represents slightly less than a mere one tenth. Accordingly, only factors with an effect size higher than 20%, a value which is much closer to that chosen as a threshold for the barriers, were considered to be significant and true motivators for faculty to pursue web-based distance education. This effect size corresponds to only those factors which appear in 5 or more of the 22 studies which is a much more acceptable number.

With the adjusted threshold there are five factors that are considered to be significant and true motivators. These factors include improved communication (31.82 %), motivation to use technology (31.82%), access to remote students (22.73%), increased quality (22.73%), and increased flexibility (31.82%). Two of these five factors are student related factors. Albeit,

flexibility is a positive factor that affects both students and instructors. This conclusion coincides with the findings of Bolliger and Wasilik (2009) that suggest that student related factors were the most important factors influencing faculty satisfaction with online teaching. The other three significant motivators are instructor related in nature. Furthermore, an interesting observation is that these three factors, communication, quality, and technology, were also recorded as significant barriers to the acceptance of online learning. This observation implies the need for training and faculty buy-in.

The motivation to use technology has enticed faculty to pursue online initiatives since their inception (Green, 2009; McCord, 2006; Crumpacker, 2001; Betts, 1998). Other studies included in the group of 22 studies may not explicitly indicate that technology use is a factor. Nonetheless, they consider learning new techniques (Hillesheim, 1998) and skills (Tabata & Johnsrud, 2008) and providing innovative instruction (Rockwell, 1999), which is only made possible with technology, as faculty motivators.

While the lack of interaction was considered a faculty barrier in 12 out of 49 studies with an effect size of 24.5% just exceeding the threshold of significance, the improved communications and greater and higher quality interaction made possible with online learning was found to be even more significant as a motivator (Lee & Gupta, 2010; Shea et al., 2005; Daugherty & Funke, 1998). McKenzie et al. (2000) suggest that web-based learning allows instructors to interact with students more frequently while Hunt (2009) maintains that it makes it possible to spend more time with students because courses are prepared ahead of time. Furthermore, Siedlackczek (2005) indicates that group discussion can be facilitated online better than in the traditional classroom.

The quality of education is another instructor related factor that while being considered a deterrent to some faculty was considered a motivator to others. Tabata and Johnsrud (2008) labeled the perceived quality of education as a primary motivator for faculty who are considering online initiatives. Consequently, faculty adopt online education because of its ability to offer higher levels of learning (Lei & Gupta, 2010; Daugherty & Funke, 1998), higher order thinking (Fish & Gill, 2009; Clay 1999), and ultimately increased quality.

McCord (2006) categorizes faculty motivators into three categories that include intrinsic, extrinsic, and institutional. With this type of categorization quality, improved communication, and technology use would be considered intrinsic factors. Meanwhile extrinsic factors include promotion, tenure, and opportunities for collaboration with other faculty, whereas institutional factors include motivators such as support, compensation, release time, and recognition. Many of the positive factors whose effect size fell below the threshold of significance were either extrinsic or institutional in nature. One important note is that while the absence of some of these factors was considered a major faculty barrier, their inclusion did not necessarily translate into a primary motivator.

The Adjunct Issue

The growth of online enrollment has led to a second separate growth sector. The number of part-time and adjunct faculty in the postsecondary education sector has also experienced a significant increase. Due to the low acceptance by traditional faculty the virtual teaching load is being taken over by adjuncts. As reported by Tipple (2010, pg. 1), the National Center for Education Statistics (NCES) indicated that adjunct instructors represented 48% of all faculty in 2008. According to the American Association for University Professors both part time and full-time non-tenure track faculty are continuing to increase (Maguire, 2009, pg 4). The many

reasons for this growth include the need for critical expertise and real world perspectives, evening and weekend availability requirements, and declining funding.

Additionally, Bedford (2009) reports of another group of educators who are playing an increasing role in online learning. Part-time faculty who create a full-time career by teaching at various institutions are a group of professionals who capitalize on the need of organizations to hire competent part-time professors with significant expertise in their discipline. As entrepreneurs they can go elsewhere when treated unfairly. Puzziferro and Shelton (2009) maintain that virtual adjunct faculty are becoming less virtual and less adjunct but rather highly professionalized and very full time. Full time part timers are no longer an exception but a reality at most institutions. Consequently, the adjunct whose primary profession is teaching is in a position to focus primarily on their instruction. Moreover, adjuncts may have more academic freedom because they have no political restrictions or bias to any organizational philosophy.

While this trend initially started in the for-profit sector, more and more traditional colleges and universities have started to adopt the model of unbundling faculty roles (Neely & Tucker, 2010) into course development, instruction, and scholarship tracks. This model is a cost effective one with an organizationally sound strategy. An online learning model like that of University of Phoenix which employs 9,000 part-time instructors and 1,500 full-time staff (teachers, managers, and support personnel) has significant cost benefits (Ruth, 2006). Quality is provided by senior full-time faculty that develop curriculum and train adjunct faculty to carry out the delivery of the online courses. However, traditional institutions have always worried about a model that relies too heavily on adjuncts for two main reasons. The first is that academic control may fall into the hands of administrators who make decisions based on financial reasons. The second reason is that quality assurance may be difficult to maintain. While the first reason may

bear some truth, Ruth (2006) reports that there is no difference between traditional and non-traditional (e.g. for-profit) online programs in terms of academic quality, starting salary after graduation, and quality of job after graduation.

Still, the issue of adjunct faculty remains a controversial one. There is increasing debate about the adjunct-university relationship as well as the quality, rigor and consistency of courses being taught by adjuncts. Quality has always been a debatable concern among the opponents of online learning let alone having the majority of the courses being taught by adjuncts. Contingent faculty raise issues of quality and job security among full-time tenured faculty (Maguire, 2009). Bedford (2009) reports that opponents to the adjunct trend argue whether adjuncts are adequately prepared to teach online and justify this argument by citing less commitment to their academic role because their dedication lies with their primary career. Some of these concerns may be justified. Albeit, practices do exist that bring a question to the legitimacy and the quality of learning that takes place in an environment where an adjunct is facilitating the process. Remarks made by adjunct professors such as, “the more classes I teach the more money I can make,” and “online teaches itself and all I have to do is go in and answer a few questions” are definitely a cause for concern. However, there is no evidence that this concern is a widespread one or that it is exclusive to adjunct online teachers. Conversely, adjuncts express their own legitimate concerns. These concerns include being undervalued and underpaid. Many part-time faculty argue that they do the same amount of work as their full-time counterparts but are compensated much less.

There are many reasons why adjuncts are motivated to teach online. Some of these factors mirror the items that were considered motivators by faculty in general. Other items are specific to adjuncts due the nature of the position. Schiffman (2009) found that among the top

three reasons were the joy of teaching, personal satisfaction, and having a flexible work schedule. Other less important motivators included job security, advancement, and benefits. In fact some adjuncts consider teaching as a type of service to the community (Tipple, 2010). This is the case with many law enforcement officers who teach criminal justice classes. Schroeder (2008) indicated that flexibility, self-growth, and the self-gratification received from teaching were major stimuli. Bedford (2009) cited flexibility and working from home as a factor for adjuncts in their decision to teach online. Primary de-motivators that deterred adjunct faculty from adopting online learning were mostly extrinsic in nature such as lack of recognition and being treated as second class citizens in the faculty lounge (Tipple, 2010).

Bedford (2009) suggests that professional adjuncts are positioned to bring quality as well as diversity to the organizations at which they work. However, most calls for the advancement of adjunct faculty go unheard. The stereotyping of the faculty who accept part-time employments has deterred administration from forming policies that respect the commitment, skills, and intellectual capacity of the adjuncts. Professional adjuncts need to have orientation, ongoing training, and opportunities for dialogue with their colleagues. Puzziferro and Shelton (2009) indicate that academic institutions need to include adjuncts into the training cycle and think of ways to engage them in the community of practice. Tipple (2010) maintains that in order to maximize quality and institutional effectiveness (this is very important since most online only institutions use adjuncts at a much higher rate) an approach must be developed that leverages the characteristics of online adjunct faculty. An environment must be nourished that inspires and motivates adjunct faculty towards a compelling vision. Education leaders can achieve this by hiring and training excellent committed quality adjuncts who are student centric and by providing an effective organizational and systems infrastructure that supports distance education

faculty as a whole. Velez (2009) suggests that creating virtual communities of practice and faculty learning communities are two ways to connect faculty to their institutions. These communities can be cohort-based or topic-based. Having a leader at the academic institution to oversee these communities and provides prolonged support to them can positively impact the culture of the institution.

Solutions towards Faculty Buy-in

To provide consistency with the previous approach used to identify the barriers and motivators that discourage or persuade faculty to pursue online learning, 26 studies were singled out from the original data set of articles used in the meta-synthesis. These articles were selected because they propose a number of solutions and recommendations that can be used to overcome faculty resistance to distance education. Similar calculations were used to measure the effect size of each of these proposed solutions and this effect size was used to determine the relative significance of each proposal.

Table 3 below shows the 12 items that represent solutions necessary to encourage faculty in the pursuit of online teaching, the number of times each of these appears in each of the 26 studies, and their effect size. A chart which shows a visual representation of the importance of each of these solutions is given in figure 14.

Solution	# of occurrences	Effect size
training & development	20	76.92%
provide tech support	8	30.77%
release time	7	26.92%
rewards & compensation	7	26.92%
Alignment with mission	6	23.08%
open communication with faculty	5	19.23%
provide admin support	4	15.38%
create a climate that fosters change	3	11.54%
infrastructure	2	7.69%
limit class size	2	7.69%
policies	2	7.69%
combat dishonesty	1	3.85%

Table 3: Solutions necessary to promote faculty acceptance of online learning

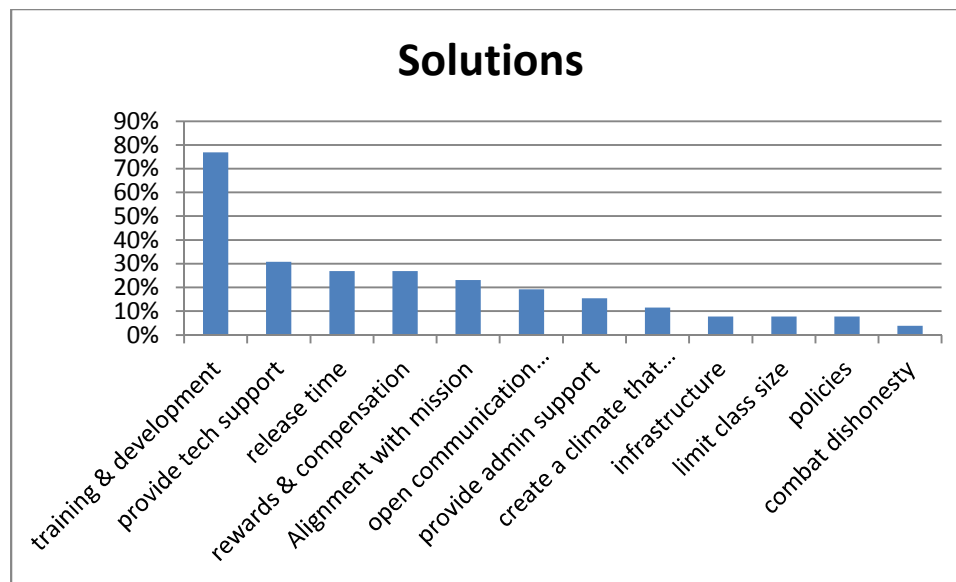


Figure 14: Solutions necessary to promote faculty acceptance of online learning

The arithmetic mean of the effect sizes for all 12 of the proposed solutions was found to be 21.47%. Using this mean as a threshold to signify importance yields five primary solutions. These solutions or recommendations include training and development (76.92%), providing technical support (30.77%), release time (26.92%), rewards and compensation (26.92%), and

alignment with mission (23.08%). It should be noted, however, that the training and development recommendation appears in 20 of the 26 studies. While this high percentage ultimately indicates the overwhelming agreement on the need for such a solution, it skews the percentages of the other recommendations given. To compensate for this effect the threshold value was re-calculated without the training and development item. This adjustment yielded an average effect size of 16.43%. The new threshold value allowed for the inclusion of one additional recommendation, providing open communication with faculty, which was deemed to be a necessary component for the success of any online initiative.

Faculty Training and Professional Development

The effect size associated with this recommendation indicates that providing training and professional development for online faculty is of primary importance. In fact, no argument exists against this importance since the earliest days of web-based education and all research indicates that training is a vital and necessary component to enable and sustain the success of any online initiative (Simpson, 2010; Walker & Johnson, 2008; McCord, 2006; Sellani & Harrington, 2002; Betts, 1998).

McKenzie et al. (2000) have called for more training workshops and seminars both in quantity and variation. Similarly, Vodanovich and Piotrowski (2005) suggested offering both in-house and consultant based workshops, allowing administrative leave time and providing monetary support for training. Training needs to occur in an ongoing fashion while resources and support should continue on after the training (Green et al., 2009; McCord, 2006; Hinsin & LaPrairie, 2005). Furthermore, training should cover all phases of course development and delivery. Introductory courseware training can help instructors new to distance education while ongoing training and professional development can help improve the effectiveness of the online

delivery options (Walker & Johnson, 2008). While the initial push and purpose of the training must be towards developing the necessary skills of the online faculty, the focus must move towards pedagogical improvement as the training matures (Orr, Williams, & Pennington, 2009). Roman, Kelsey and Lin (2010) indicate that faculty should be surveyed prior to training to measure their level of preparedness and determine the level of training required to ensure that all instructors can benefit from the training. Additionally, both technical and pedagogical support is necessary and should be components of the training programs which should be continuously evaluated and developed.

One would assume that because everyone agrees on the importance of training and professional development there would be no issue with its implementation. This is hardly the case. The latest Sloan Consortium indicates that 6% of academic leaders report that their distance education faculty receives no training. Furthermore, of the faculty receiving training 72% is internally run training and 58% is informal mentoring (Allen & Seaman, 2011). This is far from the call for ongoing training that is adequate and accessible to all faculty (Hoskins, 2010).

In order for faculty training and development to be effective, it must to be targeted and include extensive support beyond what is expected in a normal face to face environment (Goold, Coldwell & Craig, 2010). While mentorships and the sharing of best practices among faculty is a necessary component of training it is not a sufficient one. An increase in staffing in the areas of pedagogical (Orr et al, 2009) and technological (Kampov-Polevoi, 2010) expertise is necessary to provide true training and support. This type of increase can only occur with the buy-in of administration and its recognition of the importance of training through the policies and procedures that are put in place.

Technical Support

Providing adequate and accessible technical support is a necessary component to sustain online learning programs (Hoskins, 2010; Haber & Mills, 2008; Shea et al., 2005; McKenzie et al., 2000). Vodanovich and Piotrowski (2005) suggest that having a permanent tech available is a necessary requisite for institutions with online programs. Hinsien and LaPrairie (2005) agree and maintain that online faculty become more tolerant of change when knowledgeable support is made available. Kampov-Polevoi (2010) indicated that distance faculty members need both institutional and technical support. The technical support could range from writing simple html pages for their courses to creating full blown multimedia modules to support these courses because many online instructors feel that the tools built into the course management systems are inadequate.

It is conceivable that providing technical support would rate high among the suggested recommendations that could motivate faculty to adopt online learning since the lack of it was found to be one of the most significant barriers second only to technology challenges. In fact, the two solutions with the greatest effect sizes, training and providing technical support, correspond to and directly address the two barriers with the largest effect sizes which were found to be technology and the lack of technical support.

Release Time

Providing release time for faculty teaching distance courses scored third in significance among the recommended solutions to enhance faculty buy-in of online learning programs. This recommendation addresses both the time and the workload factors that were perceived by faculty as barriers to distance education. Release time may be seen as a means of rewarding faculty

(Clay, 1999), or could be provided to allow for training (Betts, 1998) or for course design and development (Maguire, 2009; Sellani & Harrington, 2002; McKenzie et al, 2000). Regardless of the purpose for which release time is allowed it is a means of recognizing the increased workload associated with distance learning courses.

Rewards and Compensation

While some studies have shown that financial compensation is not a major faculty concern when compared to issues such as student success and reliable technology (Bolliger & Wasilik, 2009), the effect size associated with the financial compensation barrier was found to be a significant one. This significance as a faculty barrier translates into the consideration of fair and appropriate financial compensation as an equally important solution (Green et al., 2009; Haber & Mills, 2008).

Moreover, financial reward has been recommended as a means of alluring faculty towards online learning since its inception. Clay (1999) indicated that rewards and incentives are important from preventing first time instructors from losing motivation. These incentives could include stipends for greater class loads, administrative support funds to attend conferences formal and informal recognition and rewards. McKenzie et al. (2000) have voiced the need for more incentives for online faculty and Sellani and Harrington (2002) considered financial compensation as a means of addressing administrator and faculty conflict in online environments. McAlister et al. (2001) maintained that instructor compensation should be clearly identified by administration. More recently, Simpson (2010) suggested that discussion on intrinsic awards should be made at the institution as well as the subunit level to increase faculty

interest, participation and satisfaction. Furthermore, distance faculty reward should be clearly conveyed in policy and guidelines.

Alignment with Mission

McAlister et al. (2001) maintained that when an institution intends to offer a web-based curriculum the distance program offerings should be congruent with the mission of the institution. Gersten (2006) indicates that a distance education strategic plan can only be aligned with the mission of an educational institution when it involves all key constituents and obtains their buy-in. Faculty are one of these constituents. An educational model which includes a bottom-up component is necessary to maintain quality and ensure ownership by the academic staff. Siedlackczek (2004) suggested that when there was no clear plan on why the college was pursuing online, faculty tend to shy away from becoming willing participants. The necessity of aligning the mission of the distance education program with the mission of the institution offering it has been recognized since the onset of online learning (Ross & Klug, 1999).

Orr et al. (2009) maintain that instructors need to know how their efforts fit into the efforts of the institution. Simpson (2010) indicates that distance education can be better conveyed to faculty if it is added as an explicit component of the institution's mission statement. This component should make a clear statement with regards to the importance of and the institution's commitment towards this mode of delivery. Similarly, subunits within the institution that are offering web-based education must review their respective mission statements to ensure that they are aligned with their distance offerings also.

Open Communication

Sellani and Harrington (2002) indicate that in order to entice faculty to adopt online learning, the administration must create a climate that fosters change and experimentation. This climate is necessary for faculty to accept their new roles (Rockwell et al., 1999). The key to creating this climate is to have open lines of communication with faculty. Bower (2001) emphasizes the importance of open communication and maintains that institutional support for faculty involvement is essential. Ross and Klug (1999) suggest that faculty concerns should be addressed openly and administration should survey their own faculty to identify the concerns. Hoskins (2010) indicates that institutions that want to offer online education must set the expectations for their faculty. Administrators must communicate the necessity for change and make it challenging and exciting while emphasizing the benefits of online education to both the faculty and their students.

One of the solutions that can make distance education more appealing to faculty should include giving faculty a voice. Greater faculty involvement will lead to a sense of ownership and more enthusiasm in teaching online (Maguire, 2009). Faculty should be consulted during planning and implementation phases (Bower, 2001). Green et al. (2009) suggest that faculty should have the opportunity to assist with program development. Maguire (2009) reports that faculty members are left out of policy making discussions but at the same time are expected to willingly teach online courses. While instructors do not want to be the only stakeholders in policy development many of them show a strong interest in policy writing and want to play a greater role. By sharing their experiences, greater faculty involvement during policy writing may help clarify current or conflicting practices and add potential policies that are noted by faculty as being missing.

Chapter 5

Conclusions and Recommendations

This report was an attempt to answer the four main research questions that were posed in Chapter 1. These questions are repeated below for the sake of clarity. As a result of the analysis and discussion presented in Chapter 4, a number of conclusions and inferences can be drawn that directly address the research questions. These conclusions and inferences are a result of synthesizing and integrating the findings that were outlined in each of the studies included in the investigation.

1. What are the necessary skills and competencies required by faculty to be successful in an online endeavor?

The competencies required to teach online are not fundamentally different from those required in a traditional campus setting. Nonetheless, while certain attributes could equally be used to describe successful university faculty teaching in any mode of delivery, technical skills stand out among the competencies required to make a successful online instructor. Moreover, from the four competency areas recommended by UNESCO (2005) which include pedagogical, social, managerial, and technical, it is the latter that has caused the greatest amount of resistance amongst faculty. The resistance to acquiring the technical skills required to successfully teach online are one of the main factors that has kept the numbers of faculty who still consider online learning an unacceptable mode of delivery at such a high percentage. Additionally, even in cases where these competencies and skill sets exist, when the role of the online faculty is ill-defined or not unbundled properly, they are not properly utilized.

2. What are the elements that will enable the transfer of ownership of online initiatives to the faculty teaching in these programs and what can academic administration do to improve faculty acceptance?

Although web-based learning has matured over the past decade and is no longer in its infancy, a significant gap still exists between the positive outlook most academic administrators have of this mode of delivering education and the negative view with which many faculty perceive it. A set of factors that served as barriers preventing faculty from embracing online learning was identified. Eliminating or in the least reducing these barriers or de-motivators would significantly enhance faculty buy-in and enable the transfer of ownership of online initiatives to faculty teaching in these programs. The elements of this set of faculty de-motivators that were found to be of primary relevance included technology limitations, quality, lack of technical support, fear of technology, workload, time issues, lack of interaction, lack of administrative support, ill-defined roles, financial compensation, and training issues. Of prime significance is how technology appears in some form or another in many of these de-motivators suggesting that the technology component is a major player that needs to be given its proper due when seeking solutions to increase faculty ownership and buy-in.

3. What are the best practices that institutions and organizations have recommended and have proven to be successful for faculty in online initiatives?

As an outcome of the investigation, a set of five factors was found to motivate faculty and encourage them to pursue online learning. These five factors that could enable the transfer of

ownership of online initiatives to the faculty teaching in these programs and facilitate faculty buy-in included improved communication, motivation to use technology, access to remote students, increased quality of education, and increased flexibility. One interesting observation from this analysis is that three of these factors were also recorded as significant barriers to the acceptance of online learning; an observation that implies the need for training to achieve faculty buy-in. These three common factors were quality of education, communication, and the use of technology.

4. What other elements that are not faculty specific, if any, may be necessary to measure institutional effectiveness for fully online programs?

While still related to faculty, one significant outcome of the investigation suggests that adjunct instructors are and will remain a necessary component of any online faculty pool. Adjuncts make up almost one half of all faculty teaching today. Moreover, most online only institutions use adjuncts at a much higher rate than traditional institutions. Hence adjuncts will play an increasingly important role in the effectiveness of online education as online learning becomes more and more prevalent and require special attention. Most adjunct faculty feel they are undervalued and underpaid. Factors that are considered as de-motivators by adjunct faculty, such as lack of recognition and being treated as second-class citizens can be overcome by an approach that leverages the qualities of online adjunct faculty. This approach should include the proper communication, orientation, and ongoing training programs.

Recommendations

A set of solutions that could lead to faculty ownership and buy-in of online learning emerged from the investigation. These solutions could be used to generate a corresponding set of recommendations geared towards closing the gap that currently exists between the acceptance levels of the administrators of online learning initiatives and the faculty that teach in these programs.

Recommendation #1 – Faculty Training and Professional Development

There is no debate over the importance of faculty training and professional development. In fact, when measuring the effect size of this component (76.92%) it was found to be three times more significant than any other component that could help with faculty acceptance. Nonetheless, poor implementation of faculty training is prevalent among academic institutions. For an online program, faculty training and development must be targeted and include extensive support beyond what is expected in a normal face to face environment. This increase can only occur with the buy-in of administration and its recognition of the importance of training through the policies and procedures that are put in place.

Recommendation #2 – Technical Support

Technical support should rate high among the suggested recommendations that could motivate faculty to adopt online learning since the lack of it was found to be one of the most significant barriers to faculty acceptance (effect size = 32.7%) second only to technology limitations (effect size = 34.7%). In fact, one could argue that the three most significant factors that were considered barriers to the acceptance of online learning that include the lack of technical support, fear of technology, and technology limitations are very closely coupled.

Providing adequate and accessible technical support for faculty teaching online could alleviate the impact of the other two factors and making it a necessary component to sustain online learning programs.

Recommendation #3 – Release Time

Providing release time for faculty teaching distance courses scored high in significance among the recommended solutions to enhance faculty buy-in of online learning programs. The effect size of this factor was 26.92% and second only to training and development, and providing technical support. This recommendation, consequently, addresses both the time and the workload factors that were perceived by faculty as significant barriers to faculty acceptance of distance education.

Recommendation #4 – Rewards and Compensation

While some studies have shown that financial compensation was not a major faculty concern, the lack of such a provision remains a significant faculty barrier (effect size = 22.4%). Therefore, because it is proven to be a significant barrier necessitates the consideration of fair and appropriate financial compensation as an equally important solution. This solution or recommendation should be clearly conveyed in policy and guidelines. Furthermore, such a solution should extend to adjunct faculty who form the majority of faculty teaching online.

Recommendation #5 – Alignment with Mission

The necessity of aligning the mission of the distance education program with the mission of the institution offering it has been recognized since the onset of online learning. Instructors need to know how their efforts fit into the efforts of the institution. In order to offset faculty fears

and gain their support, acceptance of and participations in online initiatives, the mission should make a clear statement with regards to the importance of this mode of delivery. The statement should explicitly show commitment to online learning and this commitment should be made at both the institution and the programmatic levels.

Recommendation #6 – Open Communication

Faculty should be made aware of the online initiatives that their campuses are involved in. Faculty should also be given a participatory voice in these initiatives. Greater faculty involvement will lead to a sense of ownership and more enthusiasm in teaching online. Faculty should be consulted during planning and implementation phases. An educational model which includes a bottom-up component is necessary to maintain quality and ensure ownership by the academic staff.

Discussion of Input from Experts in the Field

One of the primary goals of this dissertation was to emerge with certain faculty-based criteria that would enable accrediting agencies, specifically ACICS, to better evaluate the online programs they accredit. In its current format the CEP that ACICS requires from its colleges considers both the level of student satisfaction and the level of employer satisfaction as relevant measures of institutional effectiveness. The discussions of chapter four of this report that culminated in the six recommendations given above infer that faculty buy-in and ownership of the online process are necessary components to ensure success of the initiative. This inference suggests that adding the level of faculty satisfaction as an additional key element of the CEP can satisfy this goal. The level of faculty satisfaction can be measured through surveys in a manner similar to how campuses measure their student and employer satisfaction. Other measurement

data can be obtained by analyzing faculty retention and turnover rates. Consequently, when developing a CEP for online schools, an additional element should be added to those forming the plan. This seventh element is the level of faculty satisfaction.

Another primary goal of this dissertation was to receive input from experts in the field of education and online learning in an effort to validate the findings of the research and possibly implement them practically. Dr. Tom Wickenden from ACICS and Claudia Wilroy from Santa Barbara Business College were selected because of their expertise as well as their apparent interest in the outcomes of such a research. Unfortunately, Dr. Wickenden was unable to provide the desired input. However, Dr. Jamie Morley, who is a current ACICS commissioner as well as an expert in online education reviewed the report and provided valuable suggestions. The input from both Claudia Wilroy and Dr. Jamie Morley is discussed below.

Claudia Wilroy concurs that there is reluctance among the faculty at traditional campuses to delve into online instruction. Therefore the administration of online only programs within such campuses will resort to hiring adjunct faculty and professional part-time instructors because of the adaptability and their online teaching experience (personal communication, December 15, 2012). The continued low acceptance of the faculty to online initiatives should be a signal to administration that there needs to be more interference and communication with their own faculty to obtain buy-in. Furthermore, there is a need to lessen the amount of isolation and increase the communication between the existing faculty and the adjuncts who are teaching online and to develop mentorship programs that connect the two groups. This suggestion coincides with the first recommendation given above that calls for training and professional development. This cross training and professional development can serve a dual purpose. More familiarity with the online environment through the association with experienced adjuncts will

lead to more buy-in from existing faculty. At the same time this increased communication and team building will alleviate many of the concerns adjuncts have and make them feel more a part of the campus community.

Dr. Jamie Morley placed more emphasis on the tie-in to the CEP that schools accredited by ACICS are required to develop. While she agreed that adding faculty satisfaction to the CEP was a good idea, the link between level of faculty satisfaction and other elements of the CEP should be made more pronounced (personal communication, March 23, 2013). Her suggestion is a valid one. This link was addressed by reviewing the methods that are used to measure existing elements of the CEP such as the level of graduate and employer satisfaction and extending these methods to measure faculty satisfaction. One example of extending these methods is to conduct faculty surveys that measure satisfaction. Furthermore, these measures should be practiced with both the faculty teaching online in order to improve performance as well as with the faculty who are reluctant to teach in an effort to identify what is needed to eliminate this reluctance. Finally, accepting the level of faculty satisfaction as a key element of the CEP is only a starting point. This starting point can serve as a basis from which further research and study can be conducted to identify specific parameters of how this element can be implemented and developed to improve the outcomes of online programs.

Summary

Online learning has experienced enormous growth over the past decade and with this growth it has become increasingly important to develop and implement quality measures for this mode of delivery. Faculty plays a significant role in the perceived quality of online programs especially with the growing need to employ a pool of competent faculty who can take ownership and engage effectively in the process. One would expect that this ownership has developed and in fact matured since web-based learning is no longer in its infancy. However, even the most recent of polls indicates that the necessary faculty buy-in has not yet materialized (Allen & Seaman, 2013).

The role of the faculty member in the online learning setting occupies a new space in terms of physical characteristics, technological requirements, and social implications. This role differs from what campus-based learning has traditionally required. Furthermore, the solution towards helping faculty members to fulfill this role involves identifying a number of necessary factors that can enable faculty to apply a set of competencies to this mode of delivery. Administrators of online initiatives have a responsibility in eliminating the perceived barriers and obstacles that de-motivate faculty from adopting the online mode of delivery.

Furthermore, the academic administration of many web-based programs and initiatives have not fully recognized, adopted or implemented standards and guidelines that specifically focus on the role faculty plays. Even the accrediting bodies responsible for the oversight of these programs have not explicitly defined the faculty component when evaluating online initiatives. As an example, while the ACICS criteria lists faculty competence as a major index of quality, it does not define this competence. Additionally, the key elements of the CEP although increasing from five to six element, with the addition of graduation rates in its latest criteria effective July

12, 2012 still has no explicit acknowledgement of faculty within these six elements (<http://acics.org/publications/criteria.aspx>).

This report acknowledges the need to explicitly define the necessary ingredients that can enable faculty to play a more effective role in distance education initiatives. Consequently, the goal of the dissertation was to develop a set of recommendations that place emphasis on faculty involvement in web-based learning and could serve as a subset of the criteria necessary to evaluate online initiatives. This focus included analyzing the necessary components that promoted faculty buy-in and ownership of online education and then synthesizing the outcomes of this analysis. This synthesis was used to render solutions that could improve the perceptions currently held by faculty regarding this mode of delivery and develop a set of recommendations that can be used to motivate and fully prepare faculty for the online teaching experience.

Meta-synthesis or mixed research synthesis which is a methodology that shares common concepts with both meta-analysis and meta-ethnography was used to produce a more informed understanding of the problem by systematically synthesizing studies related to it. Meta-synthesis is a qualitative methodology that uses both qualitative and quantitative studies as its source of data. More specifically, the relationship between the qualitative and quantitative findings related to the research problem suggested the use of an integrated design. The integrated design assumes minimal methodological differences between qualitative and quantitative studies are and can produce findings that can be transformed into one another. This design was used because it is best suitable when the qualitative and quantitative findings are able to corroborate, extend or counter each other as was the case with this investigation.

Furthermore, an aggregative technique known as metasummary, which synthesizes the findings in qualitative studies, the qualitative findings of mixed research studies, and the

descriptive findings of quantitative studies, was used to conduct the investigation. After the findings related to the research questions were extracted and grouped into categories, the frequency effect size of each of the findings was calculated.

The investigation resulted in several key themes that were extracted from the synthesized studies. These key themes included how the role of the online instructor and the necessary competencies required to fulfill this role has produced a set of de-motivators that prevent many faculty members from venturing into online initiatives. At the other end of the spectrum a set of factors that motivate faculty to adopt online learning emerged from the synthesis. Another theme that was extracted from the investigation included a set of faculty based solutions that can lead to recommendations necessary to sustain a successful online program and allow for a deeper understanding of the role faculty plays in web-based distance education. For each of these key themes the metasummary approach allowed to underline the true and more significant of the elements of each set.

The first key theme included a set of de-motivators that prevented faculty from willfully accepting web-based education. It was found after calculating the frequency effect size for this set that almost half of the elements deemed important in some studies were in fact less than significant. Consequently, the main elements of the set of faculty de-motivators that were found to be of primary relevance included technology limitations, quality, lack of technical support, fear of technology, workload, time issues, lack of interaction, lack of administrative support, ill-defined roles, financial compensation, and training issues. Of prime significance is the how technology in some form or another appears in many of these de-motivators suggesting that the technology component is a major player that needs to be given its proper due when seeking solutions to increase faculty ownership and buy-in.

The second key theme was a set of factors that motivated faculty and encouraged them to pursue online learning. After calculating the frequency effect size for each of these factors only five of 19 originally extracted factors were considered significant and true motivators. These five factors included improved communication, motivation to use technology, access to remote student, increased quality, and increased flexibility. One interesting observation from this analysis is that three of these factors were also recorded as significant barriers to the acceptance of online learning; an observation that implies the need for training and faculty buy-in. These three common factors were communication, quality of education, and use of technology.

The third theme included a set of solutions that could lead to faculty ownership and buy-in of online learning. These solutions were used to generate a corresponding set of recommendations geared towards closing the gap that currently exists between the acceptance levels of the administrators of online learning initiatives and the faculty that teach in these programs. Furthermore, these recommendations suggest that the inclusion of an additional element that measures the level faculty satisfaction to the CEP of the institutions accredited by ACICS. The inclusion of this element will ensure that the administration of online schools will strive to increase faculty involvement in their plans and initiatives and take the necessary measures to obtain faculty ownership and buy-in of the online process by providing the necessary training, support, and education.

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